MEETING

STATE OF CALIFORNIA

PUBLIC EMPLOYEES' RETIREMENT SYSTEM

BOARD OF ADMINISTRATION

INVESTMENT COMMITTEE

OPEN SESSION

ROBERT F. CARLSON AUDITORIUM

LINCOLN PLAZA NORTH

400 P STREET

SACRAMENTO, CALIFORNIA

MONDAY, SEPTEMBER 19, 2016 9:44 A.M.

JAMES F. PETERS, CSR CERTIFIED SHORTHAND REPORTER LICENSE NUMBER 10063

### APPEARANCES

### COMMITTEE MEMBERS:

- Mr. Henry Jones, Chairperson
- Mr. Bill Slaton, Vice Chairperson
- Mr. Michael Bilbrey
- Mr. John Chiang, also represented by Mr. Frank Moore
- Mr. Richard Costigan
- Mr. Rob Feckner
- Mr. Richard Gillihan, represented by Ms. Katie Hagen
- Ms. Dana Hollinger
- Mr. J.J. Jelincic
- Mr. Ron Lind
- Ms. Priya Mathur
- Mr. Theresa Taylor
- Ms. Betty Yee, represented by Ms. Lynn Paquin

## STAFF:

- Mr. Doug Hoffner, Interim Chief Executive Officer
- Ms. Cheryl Eason, Chief Financial Officer
- Mr. Ted Eliopoulos, Chief Investment Officer
- Mr. Matt Jacobs, General Counsel
- Ms. Mary Anne Ashley, Chief, Legislative Affairs Division
- Ms. Natalie Bickford, Committee Secretary
- Mr. Dan Bienvenue, Managing Investment Director
- Mr. Forrest Grimes, Chief Risk Officer

# APPEARANCES CONTINUED

### STAFF:

- Mr. Curtis Ishii, Managing Investment Director
- Mr. Don Leu, Investment Manager
- Mr. Andrew Karsh, Investment Manager
- Mr. Simiso Nzima, Investment Manager
- Mr. Don Pontes, Investment Director
- Ms. Christine Reese, Investment Manager
- Mr. Mike Rosborough, Investment Director
- Mr. Wylie Tollette, Chief Operating Investment Officer

### ALSO PRESENT:

- Mr. David Brazil, Revive Oakland
- Mr. Jeff Conant, Friends of the Earth
- Mr. Stephen Conway, Town of Los Gatos
- Mr. David Crowley, K&L Gates(via teleconference)
- Mr. Allan Emkin, Pension Consulting Alliance
- Mr. Steve Foresti, Wilshire Consulting
- Mr. Andrew Junkin, Wilshire Consulting
- Mr. Patrick Lighaam, Wilshire Consulting
- Ms. Kristen Loomis, Revive Oakland, Service Employees International Union Local 1021
- Ms. Jahmese Myres, Revive Oakland
- Mr. E.J. Pavia, Urban Peace Movement, Revive Oakland

	I N D E X		
		PAGE	
1.	Call to Order and Roll Call	1	
2.	Executive Report - Chief Investment Officer Briefing	2	
3.	Consent Items Action Consent Items: a. Approval of the August 15, 2016 Investment Committee Meeting Minutes b. Rescind Investment Delegations of Authority	31	
4.	Consent Items Information Consent Items: a. Annual Calendar Review b. Draft Agenda for the November 14, 2016 Investment Committee Meeting c. Monthly Update - Performance and Risk d. Monthly Update - Investment Compliance	31	
Information Agenda Items			
5.	Asset Allocation, Performance and Risk a. CalPERS Consultant Public Fund Universe Comparison Reports b. Risk Profile Review	3 2 5 0	
6.	Program Reviews a. Public Markets Annual Program Review - Global Equity - Global Fixed Income	53	
	<ul> <li>Consultant Review of the Global Equity and Global Fixed Income Programs</li> </ul>	110	
7.	Legislation a. Federal Investment Policy Representative Update	141	
8.	Summary of Committee Direction	162	
9.	Public Comment	163	
Adjournment		175	
Reporter's Certificate			

1	PROCEEDINGS
2	CHAIRPERSON JONES: I call the Investment
3	Committee meeting to order, please.
4	The first order of business is roll call, please.
5	COMMITTEE SECRETARY BICKFORD: Henry Jones?
б	CHAIRPERSON JONES: Here.
7	COMMITTEE SECRETARY BICKFORD: Bill Slaton?
8	VICE CHAIRPERSON SLATON: Here.
9	COMMITTEE SECRETARY BICKFORD: Michael Bilbrey?
10	COMMITTEE MEMBER BILBREY: Good morning.
11	COMMITTEE SECRETARY BICKFORD: Good morning.
12	John Chiang?
13	COMMITTEE MEMBER CHIANG: Good morning.
14	COMMITTEE SECRETARY BICKFORD: Richard Costigan?
15	COMMITTEE MEMBER COSTIGAN: Here.
16	COMMITTEE SECRETARY BICKFORD: Rob Feckner?
17	COMMITTEE MEMBER FECKNER: Good morning.
18	COMMITTEE SECRETARY BICKFORD: Richard Gillihan
19	represented by Katie Hagen?
20	ACTING COMMITTEE MEMBER HAGEN: Here.
21	COMMITTEE SECRETARY BICKFORD: Good morning.
22	Dana Hollinger?
23	COMMITTEE MEMBER HOLLINGER: Here.
24	COMMITTEE SECRETARY BICKFORD: J.J. Jelincic?
25	COMMITTEE MEMBER JELINCIC: Here.

2.

```
COMMITTEE SECRETARY BICKFORD: Ron Linda?
1
             COMMITTEE MEMBER LIND: Here.
 2
             COMMITTEE SECRETARY BICKFORD:
 3
                                            Priya Mathur?
 4
             COMMITTEE MEMBER MATHUR: Good morning.
             COMMITTEE SECRETARY BICKFORD:
 5
                                            Good morning.
 6
             Theresa Taylor?
7
             COMMITTEE MEMBER TAYLOR:
8
             COMMITTEE SECRETARY BICKFORD: Betty Yee
9
    represented by Lynn Paquin?
10
             ACTING COMMITTEE MEMBER PAQUIN:
11
             CHAIRPERSON JONES:
                                 Okay. Thank you.
12
             The next item on the agenda is the CIO report,
13
    our Chief Investment Officer, Mr. Eliopoulos.
             CHIEF INVESTMENT OFFICER ELIOPOULOS: Terrific.
14
15
   Mr. Chair, members of the Investment Committee, good
16
    morning. Before we get to this slide, I have another
17
    one-page slide, and you have it in your packets as well.
18
             On the agenda today, we have a real deep dive
19
    look into our annual program review of public assets.
20
    You'll hear both from our Investment staff and many
21
   different levels within the Investment staff, and then a
22
    deep review by Wilshire Consulting on our public asset
    class teams.
23
2.4
             So I want to make sure that we reserve time for
25
    that really important review. My morning comments will be
```

brief and really confined to the information on this chart, which I'll get to in a little bit. And really these comments and this chart, you know, reflect my and the Investment Office's desire and attempt to really highlight some of the challenges that we are facing and will be facing in the market environment in the years to come.

I think it's important that the Investment

Committee and we continue to talk about these challenges

and be ready -- and be ready for them as the years unfold

and we'll be facing, I think, a very challenging

environment going forward.

In previous months, we've talked and discussed many of the features of the challenging market and macroeconomic environment. We've looked at in quite a number of ways the low return and low interest rate regime that has persisted, and looks like will continue to persist into the future. We've discussed a number of occasions and a number of years really the progress and the maturation of the U.S. economic cycle, U.S. economy being -- in what, you know, we believe to be in its mid to late economic cycle.

We took a look last month at a one-page chart that really tried to frame some of the big picture challenges that we're facing, really precipitated by the

now almost 30-year secular decline of interest rates around the globe, which really has resulted in many, if not most, U.S. pension funds and institutional investors, including CalPERS having an asset allocation that's really dominated by equity and growth assets, which poses the largest risk in our portfolio.

In addition, we looked at, and have discussed for quite some time now, the lowering of the return projections by many in the marketplace of asset classes going forward, including our own consultant. Wilshire's capital market assumptions have been lowered over the course of the last two years to the point last month where we discussed how, if we just adopted those capital market assumptions from Wilshire in our current asset allocation portfolio, it would project more like a six percent return versus a seven percent return that we assumed just two years ago. So those are all framing factors to some of the challenges we'll be confronting in the years to come.

What I wanted to highlight in this slide today is another dimension of the challenging environment we are facing and increasingly will be facing as time progresses, which is the -- you know, the cash flow pressures that the system will be facing over time in the coming years and decades looking out.

And the graph that you see before you are all

numbers that the Committee and this Board has seen before on our net cash flow status. The orange line on the bottom of the graph are the projections of our, you know, total contributions over time. To the left of the vertical gray dotted line, you know, are actuals, and to the right are projections over time.

The red line at the top of the chart are the projections of both the actuals on the left side of the axis, but going forward are the projections for benefit payments and costs. And it's really quite a -- you know, every time we look at this quite a dramatic visual of the gap over time of the difference between the total contributions and the benefit payments and costs over time.

What has plugged that gap, certainly looking backwards over the last five years, and turning to the current year and forward, is the investment income that we've earned or sold assets to achieve. And that's the negative red numbers that you see along the blue line, which takes into account the investment income that we've either earned or are projected to earn over time.

And you can see the investment portfolio has been able to plug that gap, you know, close to, you know, one to three billion dollars over the past five years. And looking forward -- and I think this is important, looking

forward over the next five years, we're sill in that one to two to three billion dollar range, but the gap grows over time.

And what that negative red numbers represents are assets that the investment portfolio, the Investment team, needs to sell in order to meet the benefit payments and other costs. And certainly with a \$300 billion fund, finding, you know, a billion dollars a year to sell is something that we can accomplish. But looking out into the future, it gets increasingly more pronounced of a task to sell \$200 million worth of assets a month, to sell \$500 million of assets a month in order to meet payments.

Now, hopefully, the corpus of our fund will be growing quite substantially over this time. And certainly if at the end of this time period our fund is \$800 billion fund, as these numbers would basically tally out to, then selling half a billion dollars or a billion dollars a month is more achievable.

But nonetheless, given the current equity profile of our asset allocation, we have quite a volatile path to chart in order to get there. These numbers all assume our base case, that the investment portfolio is able to earn a 7½ percent return annually over each year over this time period. And that is, you know, a large assumption.

What happens if we earn less than that, either

based on our own forecasts or by what the market gives us, then these gaps grow, and they come earlier. And certainly, if the gaps grow and come earlier at a time that the fund is \$300 billion in size, coming up with a half a billion dollars a month to sell in assets is more and more of a risk to the fund.

So certainly I think we have, based on our projections we hope, some time over the course of the next five years to re-engineer the portfolio. And there's much that we have done to do that. You've heard Wylie and myself talk about the Vision 2020. We have reoriented and re-engineered the governance processes of the Investment Office with the subcommittees that we've discussed internally to really put in place the decision-making apparatus in order to make decisions on what assets to sell at any given time, rather than simply deploying --decisions to deploy capital into asset classes. And that's a very necessary piece of plumbing work to do in order to be prepared.

The ALM cycle that we are now approaching is another important time to look at the risk profile of the investment portfolio, and look at particularly the cash yield or income needs of the fund over time as this gap grows in time.

Finally, really the base message is that, you

know, as our system -- as the CalPERS system continues to mature, the need to generate additional cash flow out of the investment portfolio to close this gap, this gap between outgoing benefits and costs with the income -- incoming contributions, will put additional pressure on an investment portfolio already facing the prospect of a lower return environment with a volatile asset mix.

And I think this, as I've said a number of time, we're going to face challenges as a Committee and as a staff to confront these challenges. I think we have the talent and the necessary governance structure to face these challenges together, but I think we need to continue to acknowledge both the investment environment we're facing, as well as keeping an eye, a very acutely, on the cash flow of the system, because this is a changed circumstance for Calpers. And our history, since the depression, we hadn't faced this cash flow factor turning negative until quite recently.

And it's important to -- we believe, we can't emphasize that enough, in terms of the affect it has on the investment decision making over time, and the path of returns that we have are going to be very consequential for us to manage the portfolio out into the future.

With that, Mr. Chair, those are my comments. CHAIRPERSON JONES: Okay. Thank you, Mr.

9

```
1
    Eliopoulos. Looking at the benefit payments and other
    costs, what are the components of the other costs?
 2
 3
             CHIEF INVESTMENT OFFICER ELIOPOULOS: That --
 4
    those are -- that's a good question for our -- Wylie,
5
    maybe you want to take a shot at it. I don't want to
6
    mis-categorize it.
7
             CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:
8
    guess to start with, Ted and I, are included in those
9
    costs --
10
             (Laughter.)
11
             CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:
12
             -- along with the rest of the CalPERS staff, and
13
    our operating costs.
14
             CHAIRPERSON JONES: Okay. So I just wanted to
15
   know if that's a mandated cost or a --
16
             CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:
17
             No, those are --
18
             CHAIRPERSON JONES: Okay. It's the costs that
19
    is --
20
             CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:
21
             -- the costs to run the System.
22
             CHAIRPERSON JONES: Okay. Thank you.
23
             Yes, I'll call on you in a minute, J.J., because
24
    we have several other people requested to speak.
25
             Mr. Costigan.
```

COMMITTEE MEMBER COSTIGAN: Thank you, Mr. Jones.

Mr. Eliopoulos, thank you so much for doing this. Again, the amount of information that you and your office puts out is much appreciated. I mean, we're not -- we're making sure folks know what's going on. So just some questions that I have here.

Two things. First of all, the graph assumes a 7½ percent rate of return going forward. So it hasn't taken into consideration either what you or your consultants have talked to us about, what we think the real return may be over the next 10 years.

The other thing I keep drilling into people's heads is what you tell us on a monthly basis. We're in year 8 of a 10-year recovery. We should be forecasting a downturn in the economy sometime in the next two years. I don't see the graph reflecting that.

So this assumes sort of again a rosy projection, 7%, no dips in the economy, nothing cyclical, or the volatility that we saw -- that we've seen in the last two weeks. The other -- not to put -- because we are different than myself as an individual investor. If you continue with the current discount rate, the current expenditures, and the current negative cash flow, at what point do we run out of money or can't recover? Or have you -- and I know that's a very broad question to ask, but

I mean I look my own personal portfolio and you run it out 28 years and you assume, you know, what do you have to do to survive beyond that?

I would just point out it's a little different when I go into retirement at some point, unlike the way our fund works, we still have a steady flow of cash coming in. I mean, as long as the State of California exists, and the local governments exist, we'll have funds flowing in. So is there a date sometime in the future, based upon the current trajectory with the 7½ percent, the growing cap, potentially another economic downturn, or is that too far out to -- and then I've got a couple more questions.

CHIEF INVESTMENT OFFICER ELIOPOULOS: That's a very important question, a very big one and a very -- it has some complexity to it that I want to acknowledge at the beginning of it.

The path -- I'll just take the volatility first. The path of returns is going to be very important, as we've discussed, over time. Looking at this, I'll it our base case numbers that are presented on this graph, we have some time. We can certainly make up this gap of one to two billion dollars a year and maintain the risk profile of the portfolio into the future.

But a significant drawdown would particularly be painful, especially when the current funded status of the

fund is at, you know, just below 70 percent. So the path of returns is very consequential here, and we can't predict it. So that's number one.

Number two, I think the risk factors that this Board has adopted as part of our ALM factor, which looks at the risk of the funding rate to dip below 50 percent, the volatility of employer contributions, and the absolute level of employer contributions are important risk factors, and really serve this system well to evaluate the question of the severity and the point of no return of the system.

So I would -- I guess I would turn back. We have a very robust ALM process, and we have identified collectively the risk factors that I think we need to watch to see as returns evidence themselves year by year how we are marking against those risk factors.

COMMITTEE MEMBER COSTIGAN: Well, and the risk factors are an element of an overall path forward to addressing your curve here, because the other element is both the contributions and the overall return rate.

I mean, they move in tandem. I mean, we're trying to de-risk the portfolio. This Committee has done a good job with you all of trying to identify that, while at the same time, there's enormous pressure to try to go after risk and get higher returns because the inverse is

the higher the return, the lower the employer contribution.

What the chart shows is that a combination of increased contributions and a lower rate will start moving, as referred to back in my days in the prior administration, is the fish's mouth would close. At some point, we're wanting to cross again. I mean, as you see in 01-02, or 10-11 and 11-12, the fish's mouth opened, the fish's mouth closed, if you remember our graphs. We used to love graphs in the Schwarzenegger administration.

Now, what's happening is the fish's mouth is getting larger and we have to take the two elements of that, which are returns, risk, and contributions and begin closing that gap again. And what I just don't see -- all this chart shows is with no corrective course or action, even with trying to de-risk, your benefit and payment actually, even if you de-risk, will spike higher, and your lower line would continue -- the 9.2 would grow in the out-years, because that is just an element of the three lines, is that pretty accurate?

CHIEF INVESTMENT OFFICER ELIOPOULOS: That's accurate. And to emphasize, if we return less than a 7% percent return along this path, it gets wider and sooner. And certainly a significant drawdown would also make the fish's mouth open wider earlier.

COMMITTEE MEMBER COSTIGAN: You can thank Donna Arduin for that. That was hers.

Thank you, Mr. Chair.

CHIEF INVESTMENT OFFICER ELIOPOULOS: I tried to use the same metaphor.

6 COMMITTEE MEMBER COSTIGAN: Thanks, Mr. 7 Eliopoulos.

CHAIRPERSON JONES: Okay. Mrs. Taylor.

COMMITTEE MEMBER TAYLOR: Yeah. Thank you very much, Mr. Eliopoulos. This is a really sobering look at what's going on. My -- I had a couple of questions and I think it sort of goes on with what Mr. Costigan was saying. So if we lower the return rate to say six percent, is that going to plug this whole a little bit? That's my first question.

CHIEF INVESTMENT OFFICER ELIOPOULOS: Well, there's a lot of factors that go into that. And I think that's one of the reasons we have the ALM process where the different parts of the organization provide that type of information.

One of the things, if it's the discount rate that is being lowered from 7½ to let's say 6 percent, then contribution levels will go up. And that will help plug this gap, because you have higher contributions coming in. That would also reflect as well an expectation, most

likely, that returns would be lower over that time period.

That's one of the factors that go into setting that. And
the lower return would keep the gap higher than it
otherwise would be.

COMMITTEE MEMBER TAYLOR: So it sort of cancels each other out.

CHIEF INVESTMENT OFFICER ELIOPOULOS: I wouldn't say cancels each other out, but would need to be modeled carefully to characterize it.

COMMITTEE MEMBER TAYLOR: Okay. So then I -then my other question kind of is how this happened? I'm
assuming that, at some point, we are no longer hiring the
amount of people, and that's -- we have more retirees than
we have people in the system, right?

CHIEF INVESTMENT OFFICER ELIOPOULOS: This is the demographics of --

COMMITTEE MEMBER TAYLOR: As we get more efficient, we hire less people.

CHIEF INVESTMENT OFFICER ELIOPOULOS: Well, that could be part of it. This is the demographics of an aging workforce retiring -- both retiring and living longer.

COMMITTEE MEMBER TAYLOR: Right. Okay. And then I think my last question was say in a perfect world, what would you do or what would you want to see to close this gap?

CHIEF INVESTMENT OFFICER ELIOPOULOS: In a perfect world, we need more income. So we'd want to -- we need more income and we need -- I think, collectively as a group, Board and staff, are trying to find ways to reduce the volatility and the reliance on equity assets as much as we do in the system. So we would reduce the volatility -- projected volatility of the fund, we'd lower the risk profile of the fund, and we'd look for assets that produce more income to meet the demands that we see coming from the maturation of the system.

So those -- from an investment portfolio standpoint, construction standpoint, of a maturing system, you'd want less volatility and more income in the portfolio. The difficulty -- why we don't live in a perfect world is that that comes at a price in terms of expected return and it's how much can our system, employers and employees, afford --

COMMITTEE MEMBER TAYLOR: Right, right.

CHIEF INVESTMENT OFFICER ELIOPOULOS: -- in order to meet these projections, and what is the risk appetite -- the appropriate risk appetite of the system to invest for the future?

And there are -- you know, there's always a spectrum of risk beliefs and that's why this Board is constituted to ultimately set the risk profile of the fund

in order to meet these challenges.

COMMITTEE MEMBER TAYLOR: And then lastly, I think the one thing I think about is CalPERS is kind of like a big ship. And turning the risk profile around is not something we do overnight. So like we had -- I will be talking about it later, but as we look at the global equities and such, there are things that I think you guys are looking at to change to hopefully mitigate some of the risk that we're looking and volatility. So I do appreciate this. I know this is, like I said earlier, very sobering. And I hope to work and get this worked out.

CHAIRPERSON JONES: Thank you.

Mrs. Mathur.

COMMITTEE MEMBER MATHUR: Thank you, Mr. Chair.

Well, I also want to thank you for bringing this -- you know, bringing this information. I think this is yet another piece in the ongoing conversation we're having about the sustainability of the fund, and an important conversation for us to having, and for us to be having in public with our stakeholders and our members and -- et cetera.

A couple of questions for you. You mentioned it's partly this demographic issue. And a piece of that is sort of the Baby Boomer bulge issue. And so my

understanding is that actually the cash flow negative situation will actually, at some point, ameliorate, that it will -- it will go back in the right direction on the natural as that generation ages and as we higher more people to backfill retirements, et cetera.

This chart doesn't exactly reflect that, and I know Alan Milligan is conveniently retired.

(Laughter.)

2.4

COMMITTEE MEMBER MATHUR: But how -- when is that cross-over point?

CHIEF INVESTMENT OFFICER ELIOPOULOS: Yeah. I believe -- and I think we have a risk -- a report in the Finance Committee tomorrow. So these will be really good questions to ask. And I think actually Alan will be here tomorrow as well.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:
A cameo.

CHIEF INVESTMENT OFFICER ELIOPOULOS: But my recollection is that really kicks in 20 to 30 years from now. And so that is a benefit of the PEPRA legislation. For sure it comes back down. We have to get there.

COMMITTEE MEMBER MATHUR: Yeah, there's a -- so it's further out than I had in my head.

CHIEF INVESTMENT OFFICER ELIOPOULOS: Yes.

COMMITTEE MEMBER MATHUR: Okay. The second

question that I had is about this bottom row, which is private equity cash flow. Could you just talk a little bit about what is -- what has -- what is driving these changes in the private equity cash flow?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

CHIEF INVESTMENT OFFICER ELIOPOULOS: Thank you so much for asking that. I didn't under score that in my Really, what that line, the private equity cash flow line at the very bottom of the chart, it reflects the actual net cash flow of the private equity portfolio. So all of the sales and actual contributions put into partnerships, it's the net. And it has been quite robustly positive the last few years. So point one is that while we don't view private equity as a source for income of the fund, since so much of it is -- almost all of it is produced by appreciation and sales of the private companies, what we've seen particularly in the last three years -- you can see the \$6.9 billion and net positive cash flow from private equity in 2013 -- or 2012, 2013, 5.6 billion positive in 2012, '13, 5.6 billion and then 5.1 billion.

We've -- the private equity portfolio has been gushing cash to the system, and very favorable closing this gap the last four or five years. And that reflects the attractive -- yeah, the attractive equity market valuations. So our partners are selling into that market

more than they're investing.

As you can see in the numbers projected going forward, it's still projected to be positive cash flow. That could happen, but there are also scenarios that it would not, in fact, projecting the cash flow of the private equity is probably the most volatile of the things that we could project. And certainly, if these numbers don't come true, if private equity reverses itself, either because of the returns that it receives -- you can see this has the expectations that we'd receive a net 9.33 percent return, that's what's assumed in the 7½. But if it returns 6 or 3, then the cash flow contribution comes down.

The other potential effect is if the market dynamic changes so that our private equity partners are investing more into new companies than harvesting out, these numbers can flip negative. So we keep a very close eye on the cash flow projections of the private equity portfolio, because it can have a real delta for us in terms of closing these gaps.

So far, it's been a spectacularly beneficial cash flow provider to the fund, which has helped mask certainly some of the gap that we have of the last few years, and we project it to continue playing that role certainly this year and next year. But as we look out longer into this

future, we're more and more skeptical as to how much of net cash flow the private equity portfolio will produce.

COMMITTEE MEMBER MATHUR: So this line has a drop-off after 2026. Is that by design or it's just impossible to project?

CHIEF INVESTMENT OFFICER ELIOPOULOS: Yeah, we just stop projecting after that.

COMMITTEE MEMBER MATHUR: Fair enough.

CHIEF INVESTMENT OFFICER ELIOPOULOS: It's to speculative.

COMMITTEE MEMBER MATHUR: And then real estate, we've also sort of been shifting towards more income-producing investments. But I notice you haven't quite called that out separately. Is there a reason or --

CHIEF INVESTMENT OFFICER ELIOPOULOS: Yes, we have. And that will be a -- this change character of the real estate portfolio will be a benefit from a cash flow standpoint. We've gone from roughly 20 percent of the real estate portfolio in 2007 being core commercial real estate to today 80 percent. And that certainly has an effect.

This recent activity of, you know, selling out our, you know, \$3 billion of opportunistic real estate has made some of this projection a little choppy, but it is something that we will be bringing to the Board what we

expect the stable cash yield off of the core real estate portfolio will be. But it is one of the strategic decisions that we made as a committee and as an Investment staff to gather this income producing core real estate really with an eye towards this environment going forward.

COMMITTEE MEMBER MATHUR: And then finally, sorry, infrastructure, which can also be income producing, how much of a focus do we have on that in the -- in our infrastructure portfolio? I know it's still relatively small. We're working to grow it. Hopefully, it will pick up in the next few years. But what are we thinking on that?

CHIEF INVESTMENT OFFICER ELIOPOULOS: Too small to matter right now as you mentioned. The policy that the Committee adopted was to weight heavily the equivalent core income-producing component of infrastructure rather than greenfield, just for this very reason. We think real assets, both real estate and infrastructure, can play a very important role in providing cash yield, at the same time providing growth through, and inflation protection.

COMMITTEE MEMBER MATHUR: Okay. Thank you. CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: To follow up on Henry's question, these other costs, is that all of the costs throughout the entire system or do you have only

investment costs built into this?

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

That's all the costs of CalPERS.

COMMITTEE MEMBER JELINCIC: Okay. And that was the question I wanted to follow up. But I -- I hate to use a Schwarzenegger image, but since we've got it out there. You know, you rightly point out that lower returns widen the fish's mouth. But on the flip side, higher returns close -- helps close the mouth.

CHIEF INVESTMENT OFFICER ELIOPOULOS: That's exactly true.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:
That's true.

CHIEF INVESTMENT OFFICER ELIOPOULOS: This path of returns is going o be very consequential for us.

COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Okay. Ms. Hollinger.

COMMITTEE MEMBER HOLLINGER: Thank you. Thank you. I really appreciate it. Representing the insurance industry, we're in risk mitigation. And when you manage to a liability and you have a maturing -- and you're cash flow negative, I think what's really important that could -- that would add even another level of sobriety is the impact of a negative return, and that we have to understand that in volatility, when you're cash flow

negative, you can't catch up when you have maturing. So this fish would have no opportunity to close its mouth.

CHIEF INVESTMENT OFFICER ELIOPOULOS: That's very true. I don't know about the no opportunity to close its mouth. It depends on how severe.

COMMITTEE MEMBER HOLLINGER: It depends upon how severe. And that the orientation right now really needs to be on de-risking and on downside protection, because we can't afford the volatility -- the negative volatility.

CHIEF INVESTMENT OFFICER ELIOPOULOS: We believe you're correct on that. We think the risks are asymmetric back to the downside.

COMMITTEE MEMBER HOLLINGER: Exactly.

CHIEF INVESTMENT OFFICER ELIOPOULOS: And to highlight the point you just made, it's very difficult in a down-market to be selling assets to meet --

COMMITTEE MEMBER HOLLINGER: Exactly.

CHIEF INVESTMENT OFFICER ELIOPOULOS: -- these benefits, so the risk to the --

COMMITTEE MEMBER HOLLINGER: It's exacerbated.

CHIEF INVESTMENT OFFICER ELIOPOULOS: It's exacerbated, which makes the downside risk, in our view, more pronounced than the potential benefit of an upside.

COMMITTEE MEMBER HOLLINGER: Exactly. And I really want this Board, as well as our constituents, to

understand that, because it's a real game-changer. And it totally changes how you have to position the portfolio.

Thank you.

CHIEF INVESTMENT OFFICER ELIOPOULOS: Right.

CHAIRPERSON JONES: Okay. Mr. Lind.

COMMITTEE MEMBER LIND: Thank you.

So this is obviously not a new revelation. We've been working through this, and we went through a long and exhaustive process to develop our risk mitigation efforts. I know some want to revisit that sooner rather than later, and rather than waiting for the ALM process. And we'll be having that discussion over the course of the week. I think this chart really does a good job in sort of, you know, describing what the problem looks like.

I just think it's important to point out, you know, because we on the Board and everybody here, and certainly our members and people watching on TV are focused like a laser beam on this fund, on CalPERS. But this is clearly not just a CalPERS issue, not just a public fund issue, this is a pension fund issue for our society.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

It's a retiree issue.

COMMITTEE MEMBER LIND: Yeah, every -- nearly every fund are facing the same set of problems around

demographics, and cash flow negativity, whether it's foundation plans, or the world that I came from Taft-Hartley plans. You know, ERISA plans have a different set of federal regulations that force them to do certain things over a shorter period of time, but we're all facing this. And I just think it's important to keep that perspective as we sort of work through the conversation.

CHAIRPERSON JONES: Thank you, Mr. Lind. Mr. Costigan.

COMMITTEE MEMBER COSTIGAN: I just wanted to follow up on one point Ms. Mathur raised, that on the -- just so I can understand it. The point was on the natural at some point, the lines will close, because we have employees that are retiring and new ones coming under. Except at least what I don't see, or I'd like to have a discussion on, and we can talk more tomorrow at Finance, is where is PEPRA reform in this? Because those new employees are different than the current employees. So those employees are actually paying less into the system, longer vesting periods, and what we also know is there is more turnover among the State workforce than there was in the past.

So I'm just trying to get more to the answer is maybe historically that would have been the case, but our

workforce is changing and the demographic of the employee paying in is different. And up until 2011 -- so the thing is we actually have a group of folks that came into the system prior to '11 that we have to account for under the old system for 40 or 50 years with a number of new employees.

2.4

And if I recall correctly, the first two years of that new employee they're not even in the system. It's that third year that they come in, and then they're playing catch up, and then it's 20 years.

So at some point, I would like to figure out how we have a discussion about how that workforce -- I know we have -- we project savings, so does this chart assume those savings, the PEPRA savings going out?

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: The chart does include the impacts of PEPRA.

COMMITTEE MEMBER COSTIGAN: Okay. So even with the impacts of PEPRA, what we see is still continuing to grow?

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

That's right. As Ted mentioned earlier, I think it's a great question for your Finance Committee tomorrow, and the actuaries. They're the experts on those.

COMMITTEE MEMBER COSTIGAN: Scott.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: But

the potential closing of the fish mouth relative to PEPRA -- the impactS of PEPRA is further out than this chart demonstrates. It's 30 years plus.

2.4

outside of the ALM process.

COMMITTEE MEMBER COSTIGAN: Thank you.

CHAIRPERSON JONES: Okay. Ms. Paquin.

ACTING COMMITTEE MEMBER PAQUIN: Thank you.

Thank you for this information and continuing to shine a light on these very important subjects. And, you know, I think that there's so many variables and moving pieces that it's difficult to focus on any one piece of that,

And that said, I was also wondering if the ALM process will include a survey of public agencies to see how they are approaching paying for their pension liabilities at the current time, and any impacts to any future increases as well? And I know that every agency has their own risk portfolio and profile, but it would be very beneficial I think to hear what some of the best practices are.

CHIEF INVESTMENT OFFICER ELIOPOULOS: Great.

We'll make sure to forward that to the Finance Committee and to Cheryl and Doug and the team. They'll be -- they'll take the lead on that.

ACTING COMMITTEE MEMBER PAQUIN: Thank you. CHAIRPERSON JONES: Okay. Mr. Slaton.

VICE CHAIRPERSON SLATON: Thank you, Mr. Chair.

I think Mr. Lind raised a very interesting point that this is not just a CalPERS issue. This is a global issue, in fact, but that does not mean that each agency isn't responsible for dealing with it themselves, and addressing the issue.

I want to come back to the issue of asymmetric risk and cash flow, because, you know, at the end of the day, cash flow is so important, and particularly when we have negative cash flow.

So this chart -- the blue line on the chart is -- assumes a 7½ percent return. What I don't see in the chart is what happens to that gap if you don't change the bottom red line, but you change the blue line to reflect, let's say, going forward, and -- you know, you can -- everybody can pick their number, whether it's, you know, 6½, or 7, or 6. You know, you pick your number. But how -- what's the sensitivity level if you drop that number without changing the bottom red line?

Do you have a comment about that or is that something that's easily produced?

CHIEF INVESTMENT OFFICER ELIOPOULOS: Yes, it's something that we could bring to this Committee, if the Committee would like that. We thought it would be too many charts, too many numbers to hit right away. And

the -- I think the point is made based on our base case number that this is a challenging environment going forward. But certainly, a 6 percent return or any shock to this system, it gets wider faster.

VICE CHAIRPERSON SLATON: Yeah. And it's just -it's really a matter of seeing that -- you know, how
volatile is that issue. And now that you've presented the
base case, I think it would be easy to build on that to
see what the implications would be. I think it's
important for this Committee to know that.

CHIEF INVESTMENT OFFICER ELIOPOULOS: We'd look for direction from the Committee on that. We can bring that information back.

CHAIRPERSON JONES: Okay. Why don't we hold that, because I think there may be some information already available that responds to his question, but I just need to be sure it does, and then we'll decide whether or not we come back with it. Okay. Thank you.

CHIEF INVESTMENT OFFICER ELIOPOULOS: Sure.

CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: I want to respond to a couple of things Rich said. New employees are no longer out of the system for the first two years. PEPRA eliminated that. And new employees actually pay a higher percent of their pay into the system. It may be because

they're new, their pay is less, and so the dollar amount may be less, but I wanted to make sure those two things were clear. And I will again acknowledge the asymmetrical risk, but that doesn't mean that you should not be looking at what you're walking away from. So you need to look at both sides.

Because of the eye asymmetrical nature, you may very -- and probably should weight the downside more. But you can't -- you can't balance risk if you don't look at both sides.

Thank you.

CHAIRPERSON JONES: Okay. Thank you. And that's the last question we have on the introduction to today.

(Laughter.)

CHAIRPERSON JONES: Okay. Now, we will move to the next item on the agenda, action consent items. We need a motion, please.

COMMITTEE MEMBER MATHUR: Move approval.

CHAIRPERSON JONES: Moved by Mrs. Mathur.

COMMITTEE MEMBER TAYLOR: Second.

CHAIRPERSON JONES: Second by Mrs. Taylor.

All those in favor aye, please?

(Ayes.)

24 CHAIRPERSON JONES: Thank you. The items passes.

The next item is consent information. And I just

want to make a comment on the calendar and the consent information item. There's one change to the annual calendar in the book. It is actually the March 2017 meeting that has no scheduled item, not April.

Also, I've asked staff to update the language on the Committee annual calendar next month. Months without scheduled items will be noticed with the phrase no agenda items currently scheduled, instead of being left blank. So we'll correct that going forward. Thank you very much.

Now, we'll move to the next item on the Agenda,

Item 5, Asset Allocation, Performance, And Risk.

Mr. Junkin

(Thereupon an overhead presentation was presented as follows.)

MR. JUNKIN: Good morning. Andrew Junkin with Wilshire Consulting.

This report compares CalPERS performance and asset allocation to a variety of public fund -- public pension fund peers. I'm not going to hit every single page, but there are a few notes that I think are worthy to draw out.

--000--

MR. JUNKIN: Let's start with the fact that the universe rankings, 1 is high and 100 is low. Sometimes it depends on who's set up the chart. So I'll just establish

that right from the beginning. And the way this chart works if you look sort of at the bottom where it says total plan composites, that's the returns for CalPERS. The first number, the parenthetical number is the universe ranking.

So as we look at -- it's probably not worth looking at anything less than a year, quite frankly, and really, we probably ought to be focused on the end of the chart. You can see the returns one year, a little less than one percent. This is different than what's been reported. Some of the costs that are not included in this. This is not a true net, net, net number. It's kind of net of investment management fees, but not of some of the staff costs, and that drives the difference.

But you can see that slightly less than one percent return puts it in the 59th percentile, out to 3 years, 7.14 puts it right at the median fund in this universe. This is 10 billion and up.

If we move that number up significantly, we cut out a lot of funds, and then we're comparing CalPERS against 3 or 4 funds, and so the comparison becomes kind of moot.

I'm not going to spend a lot of time on this page, other than just kind of to use it to set up the rest of the pages. You can see, I think, the 10-year number is

probably where we ought to be focused here. The return of 5.3 percent, 88th percentile. We're going to walk through some of the asset classes and see what's driving that, because I think that's the most important part.

--000--

MR. JUNKIN: Let's go here to the next page, page 3 of 22 -- I'm sorry, page 4 of 22, the five-year risk and return chart. And it's -- the icons here are not great. There is a little T on that chart. It's just left of center right along the horizontal line there. And so what it's telling you is that in terms of risk, CalPERS has been below median. And in terms return over that five-year period, 52nd percentile is sort of right at median. So that's a pretty good tradeoff relative to peers. Let's go from there.

--000--

MR. JUNKIN: This is a big page here, so I want to spend a minute on this, page five of 22. These are not returns. This is the actual percentage allocated to each of these asset classes compared to the peer groups. And so what we should really be looking at are differences. And I think the two that kind of jump off the page are the weighting to international equity.

So here we look through the global equity portfolio and we say how much is international, how much

is U.S., because that's how a lot of pension funds still invest is U.S. versus international. You'll have taken a global approach. But the difference is, as a result of that, you have a much higher allocation to international equity than many of your peers do. It's in the 15th percentile.

The other thing that sort of jumps off the page here is real estate, you have a pretty high allocation, top quartile. I would also say alternative, which really captures just private equity at this point, lower than a lot of peers. But again, this is where the size issue becomes an issue. It's easier to have 10 or 15 percent to alternatives when your at \$10 billion plan than when you're a \$300 billion plan. So in some senses, that's sort of the tail wagging the dog.

Any questions on this page before I move on?
No. Okay.

CHAIRPERSON JONES: Okay. Let's wait to finish and we'll come back to the questions.

MR. JUNKIN: Great.

--000--

MR. JUNKIN: So I'm going to bounce around a little bit here. Page 10 of 22 -- I'm sorry, let's do 8 of 22. So this is the U.S. equity returns, public equities, and you can see here that CalPERS - again, just

looking at that total plan composites line - really is above median in most of the long-term periods. I'm looking three years and out, 47th percentile, 43rd, 39th, 33rd percentile over the last 10 years. So really public equity, you all are doing a good job versus your peers on the U.S. side. Skip ahead two pages now to page 10.

--000--

MR. JUNKIN: International equity, I'm looking at the same things here. The universe rankings, you can see 41st, when we look at the 3-year, a little bit more challenging in the 5- and the 7-year period, and the 10-year period. But returns have been pretty good in the international equity segment as well. Now, I'm going to go back and show the combined global equity.

--000--

MR. JUNKIN: And here's where the difference comes into play. Because of your more significant allocation to international equities, which underperformed U.S. equity, your global equity rankings don't look all that good. So this is really just a function of that U.S./non-U.S. Split. And you can see the returns at 5 years, for example, in the 78th percentile; 3 years in the 58th percentile.

Our view, and that of your staff, has been for -- in particular for a size of your fund, if you're

looking for economic exposure to global growth, which is realty the fundamental reason why you would invest in public equity, going global makes the most sense. It is -- it does make you look different than many of your peers, as we've seen, but fundamentally we believe that's the best way to capture global growth and transform it into a return.

--000--

MR. JUNKIN: I wrote down the page numbers at the bottom, which aren't showing up, so I'm having to sort of catch up here. Page 12 of 22, private equity returns, here it's -- we shouldn't even be looking at things inside of five years. But at the five-year return, you can see the universe ranking is right about median over 7 years, and 10 years a little bit better, the 15th percentile, the 35th percentile. So from a peer universe, the private equity portfolio is doing well.

--000--

MR. JUNKIN: Page 14, fixed income, another bright spot. And we'll cover this in the Wilshire review of global fixed income. You can see returns here compared to the universe really are in the top decile across many of the time periods. A lot of that is due to the fact that you've had a longer duration positioned portfolio than many of your peers. Again, that's a strategic

decision. That's not a tactical decision, but it has paid off.

--000--

MR. JUNKIN: And then I'll end with real estate. Make sure I've got the right -- that's fixed income. Sorry. Page 20 of 22, and this is quite obviously a tale of two cities. Most recently, real estate returns have been good, when you look at the 3 years, 5 years -- you know, 5 years in the top decile. But then we get out to 7 years and 10 years, where we're incorporating the remnants of the global financial crisis, and obviously that's a different story.

So the dramatic repositioning that the portfolio went through as a result of the global financial crisis, I think, has really borne fruit. There was obviously a lot of pain in 2008 and 2009, which is still showing up in those numbers.

So that's where I'll conclude my comments and be happy to take any questions.

CHAIRPERSON JONES: Okay. Yes. Mrs. Mathur.

COMMITTEE MEMBER MATHUR: Thank you, Mr. Chair. I have a big picture question to start with, and that is, is this kind of universe comparison really useful and constructive for a fund like CalPERS, and particularly when the universe is defined as \$10 billion or more, and

that does make a material difference in terms of what -- what our allocation can even look like, as you noted, particularly on private equity, given the capacity of some of those markets?

MR. JUNKIN: I think it's interesting information. It's indicative. I would not use it to change strategies.

COMMITTEE MEMBER MATHUR: It's indicative -
MR. JUNKIN: It is a way to point out where you
have significant differences with your peers, and maybe --

COMMITTEE MEMBER MATHUR: And why is that useful?

MR. JUNKIN: Well, I think it could lead you to examine areas of the market that maybe you have not considered, or where you look significantly different than the market. So I think, for example, your liquidity allocation -- let me go back to that page. I didn't note it, because it's not a big part of the portfolio. You know, 87 percent of peers have more cash and liquidity in their portfolios. That might make you think what are they doing that's different? Why are we at this level?

Well, the fact of the matter is you all have a liquidity policy. You have, I think, procedures in place that allow you to run at a lower number, but it's that kind of thing that I think this is useful for really just to call out differences. I would not -- again, I would

not use it to make investment decisions. I have experienced that with other clients, and this is not, absolutely not, a decision-making tool.

COMMITTEE MEMBER MATHUR: And do you think this universe is the right one? I mean, \$10 billion to me sounds quite low to be included in our universe. And it's not -- and it's a different level than what we look at when we're looking at costs, for example, under the CEM analysis. It's lower than that. I mean, CEM has a higher number, higher threshold.

MR. JUNKIN: We've looked at moving the threshold up. Since this is U.S. plans only, and CEM is global, if we move it up, you then have a universe that is so small that it's not representative of really anything.

So that's a fine line to walk. I mean, we could -- we could tailor this universe to 50 billion and up, and you'd probably have 5 or 6 plans. And I don't know how much you gain from looking at peer universe of 5 or 6 plans.

COMMITTEE MEMBER MATHUR: Okay. I think we should think about, and maybe this is a question really for the Chair, whether this is -- this provides enough information that it's really worth us spending a lot of time in open session about -- I mean, in any session. I mean -- but I just -- I'm just not sure that this is the

right use of our time from a strategic perspective, particularly as we are trying to position ourselves in a particular way that might not be the same as our peers.

And so comparisons to our peers -- you know, for example, you mentioned the global equity benchmark, and that we have a true global equity benchmark, and no U.S. bias. That clearly has caused us to perform differently, and yet we might have conviction behind that decision, as you noted. So anyway, I just -- there might be some fruit in here, but I'm just not sure that it's worth a lot of time.

CHAIRPERSON JONES: Okay. Thank you.

And my direction on that, that we will discuss this and report back to the Committee. Bill and I will meet with staff and also with Wilshire and talk about the benefit-cost analysis issue, and then report back to the Committee. Okay?

Thank you.

Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: The -- on that particular issue, I mean, I think we need to recognize we're a public fund, and if we don't make the comparisons, others are going to make them. So there's something to be said for doing it ourselves.

But on page 4 of 22, 98 of the iPad, the T is

kind of hard to find, and that's been an ongoing problem. So you may want to think about your graphics. But one of the things I note here is that we're basically at median in terms of return, but below median in terms of the risk.

But when I look at each of the asset classes, they tend to be above the risk line, in some cases very close to it, but they're fairly consistently in the more return, more risk quadrant.

Can you help me understand that? How can ever asset be riskier than normal and --

MR. JUNKIN: Yeah, it is -- it is a matter of diversification. And I would suggest probably the most powerful driver to pull the total fund to the left, when everything else is to the right is the nature of the fixed income portfolio. Because it is pretty different in terms of duration relative to what other people use, it has served as a better equity buffer than a traditional Barclays aggregate portfolio would.

COMMITTEE MEMBER JELINCIC: But even the fixed income, which is on slide 15, is well above the mean in risk. And again, it's in that upper right quadrant.

MR. JUNKIN: Right. And if the upmarket returns in the fixed income portfolio are being primarily captured - I'm just going to use this as an example - when the equity market is declining, then what's not being

43

1 captured in the equity graph, or the fixed income graph, but is in the total fund graph, is that diversification. 2 3 COMMITTEE MEMBER JELINCIC: Okay. 4 MR. JUNKIN: The correlation between the asset 5 classes I would say, and in particular for fixed income, 6 but could be the case across others, and this is not 7 something that is tracked on a universe basis to my 8 knowledge, the correlation is lower for many of your asset 9 classes than it would be for others. And that is captured 10 by the lower total fund risk versus the asset class risks. 11 COMMITTEE MEMBER JELINCIC: Okay. In looking at slide 15 for this universe -- it's the fixed income -- for 12 13 this universe, we are the 9th riskiest -- or 9th 14 percentile or --15 That's right. Yeah, top decile in MR. JUNKIN: 16 terms of volatility, which is not the only measure of 17 risk. 18 COMMITTEE MEMBER JELINCIC: For volatility and 19 12th in return. 20 MR. JUNKIN: That's right. 21 COMMITTEE MEMBER JELINCIC: I just wanted to make 22 sure I was reading that right. 23 Thank you.

MR. JUNKIN: You are reading it precisely

24

25

correctly.

COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Mr. Chiang.

COMMITTEE MEMBER CHIANG: Do we have any sense of at what point assets under management the organizations build up their internal infrastructure in regards to investment capacity? So how much of it, as you grow assets, becomes internally managed, right? So when Priya is trying to draw comparisons, right, we do this so that we can enhance our capacity expertise and try to generate alpha, right, through -- in certain areas. So I'm just -- the -- I'm certainly trying to get to the same sense of where Priya is trying to get, but trying to get at it in a more nuanced view, and expand, and if that's our understanding of what advantages we may garner and perhaps be failing to capture.

MR. JUNKIN: Well, it's certainly not contained in this report, and, in fact, it's probably -- that might be a CEM question, the mix between internal and external, I would say just working with Wilshire clients you begin to see internal asset management start around 10 billion. By the time you're to 25 billion, I think most funds really have some kind of internal management, whether it's equity or fixed income. Those are the two places most people will go direct first, and those are the places where you've really sort of done it.

It's rare, except in the case of the Canadian plans, where people are -- where institutions are doing direct real estate deals, direct infrastructure deals, direct private equity deals. That tends to still be through external partners.

So somewhere between 10 and 25 billion, I think the switch gets flipped to begin to include internal management. It depends on the organization as to what -- at what level that occurs.

COMMITTEE MEMBER CHIANG: And how about where the build out is, in which asset categories?

MR. JUNKIN: Well, it tends to be one of either fixed income or equity first. My personal view is equity is probably a harder place to build out initially, unless you're going to have a pretty concentrated portfolio. So some people may be running S&P 500 index funds internally. But to get to the global capabilities that you all have, that really requires a more significant asset base.

So again, this is anecdotal, but if I had to guess, I would say fixed income is probably the place people start, and it will be investment grade. There will be a lot of treasuries. I mean, you don't have to really do credit work on treasuries, as long as you believe the government is going to support the full faith and credit guarantee there.

And so that leaves two-thirds or half of the rest of the investable fixed income universe on an investment grade standpoint, where you've got to dig in and do credit work. And so you can build out that team, I think, at a smaller level than you can start a Global Equity Program to be managed internally.

Did I answer your question?

2.4

COMMITTEE MEMBER CHIANG: You did. And then,
Ted, we don't have to have this conversation now or later
on, but I'm just thinking about, right, we made the
analysis with hedge funds, but otherwise, you know, as we
deliberate and you guys do this on a daily basis, you
know, where we're building out or perhaps where we should
reduce in regards to relative to return. So if you could
share that at some future date. I don't want to hold up
everybody's time.

CHAIRPERSON JONES: Okay. Thank you. We do have a request from the public to speak on Item 5A. Mr. Jeff Conant. Are you in the auditorium?

If you could come over to the end mic to your right there. And you will have 3 minutes to speak. And the clock will start once you start speaking. You can monitor it right below here.

MR. CONANT: Can you hear me?

CHAIRPERSON JONES: Yes.

MR. CONANT: Okay. Thank you, Mr. Chair and members of the Board. My name is Jeff Conant, and I am the director of the International Forest Program with Friends of the Earth, which is an international environmental organization with member groups in 75 countries and an office here in Berkeley in California.

My apologies that my presentation doesn't speak exactly to the questions that have been on the agenda here, but it's something we've been working on for some time.

The issue that I want to bring to your attention today has to do with the environmental, social, and governance risks associated with CalPERS investments in companies linked to topical de-forestation. CalPERS recent divestment from thermal coal is a great achievement, and marks a milestone in California's leadership on climate, and is part of a clear trend towards financing policies that take into account climate risk and broader environmental impacts.

And now, in our view, CalPERS has another opportunity to show great climate leadership, which is to go de-forestation and land-grab free specifically in your international and emerging markets portfolios.

Specifically, it's our understanding that through CalPERS emerging markets funds managed by Dimensional Fund

Advisors, CalPERS may have significant exposure to companies in the palm oil sector. The rapid expansion of the global palm oil industry into the world's remaining tropical forests is leading to serious rain forest destruction, species extinction, as well as violations of human rights.

Land use change and deforestation related to the expansion of agribusiness is second only to burning fossil fuels as a leading cause of greenhouse gas emissions.

Worldwide, the fastest growing cause of tropical de-forestation is the rapid expansion of industrial palm oil plantations. Just this morning, actually, Harvard University released a study showing that air pollution from last year's fires -- forest fires in Indonesia may have caused upwards of 100,000 premature deaths due to air pollution.

And this is directly linked to clearing lands for palm oil plantations. So give this context, we would like to see CalPERS adopt a comprehensive policy that will effectively eliminate tropical deforestation and land grabbing from CalPERS portfolios beginning by disclosing holdings in this sector.

Dimensional Fund Advisors, which manages funds for CalPERS, is the largest holder of palm oil plantation companies in the U.S. Former California representative

Henry Waxman has recently sent a letter to Mr. Chiang articulating this ask of CalPERS. And I've included copies of the letter in the packets I've prepared for the Board. Several thousand of our supporters in the State, many of them CalPERS members, have also recently signed a petition making this same ask, and I've submitted these signatures to the Board as well.

At the same time, and this is the positive part, I think, we at Friends of the Earth, have been in dialogue with representatives of Dimensional's sustainability advisory council. And they are seriously considering excluding a list of the worst palm oil companies from several of their offerings. They've told me very --

MR. CONANT: Okay. My pitch is essentially that CalPERS engage in dialogue with Dimensional fund advisors and consider encouraging them to offer deforestation free options, in which CalPERS could move some of your emerging markets holdings.

CHAIRPERSON JONES: Mr. Conant, your time is up.

CHAIRPERSON JONES: Okay. Thank you.

MR. CONANT: So thank you for your time.

CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: I was just going to ask if we could extend his time.

CHAIRPERSON JONES: I think he's finished now, so

we could just move forward to the next item. And also -- sure. Okay. Thank you.

Item 5B, Risk Profile Review. Mr. Eliopoulos. CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Thank you, Mr. Chairman. Wylie Tollette,
Investment Office staff.

This item is a continuation of the new Enterprise Risk Management Framework presented to the Risk and Audit Committee back in June. The purpose is to highlight the enterprise risks that each committee is responsible for overseeing. Risk and Audit is actually scheduled to receive an in-depth review of this new framework at tomorrow's meeting.

Forrest Grimes, our Chief Risk Officer for the enterprise, is also here to answer questions about the new framework and any related process.

As you can see in the attachments, the Investment Committee is responsible for overseeing investment risk and performance, a key driver of overall pension funding risk. We share pension funding risk with the Finance and Administration Committee who oversee the Actuarial and Finance offices, our partners, in the asset liability management process.

The ALM process is CalPERS primary forum for addressing the balance between benefits paid,

contributions received, and investment risks taken to achieve returns.

2.4

On attachment 2 of this agenda item, you'll find six risk drivers underlying pension funding risk. I'll direct your attention to driver number 6 on the second page relating to the risk of achieving our expected rate of return.

As you may note in Driver number 6, over the past year, CalPERS took an important step in approving a new risk mitigation policy. This policy is likely to help reduce investment risk over the long term.

However, as you've seen in recent information on the capital markets, as well as in Ted's introductory comments, the outlook for returns for the next 10 years is actually lower by 90 basis points than was estimated just a few years ago during the ALM in 2013. This has increased the risk of achieving our expected rate of return over the medium term. This will be a key and important focus during the upcoming ALM and other discussions.

So with that, I'll pause, and see if there's any questions for Forrest, Ted, or I.

CHAIRPERSON JONES: No questions -- oh, just -- Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: On the risk drivers,

Risk Driver 4, Effective Mitigation and Controls in Place:
Actuarial Smoothing, does that not have both an increased
risk and a decreased risk built into that smoothing
process?

2.4

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Forrest, I think that might be a best -- a question probably best directed at the actuaries, but I'll perhaps turn to Forrest and see if he a has comment in terms of the process we might employ to answer that question. I am definitely not an expert on the actuarial smoothing policy.

CHIEF RISK OFFICER GRIMES: Good morning. Forrest Grimes, Calpers staff.

Mr. Jelincic, I'm hopeful that you will defer that question to the Finance and Administration Committee, which will truly address that particular driver tomorrow, if that's okay with you?

COMMITTEE MEMBER JELINCIC: I can do that.

CHIEF RISK OFFICER GRIMES: Okay. Thank you.

CHAIRPERSON JONES: Okay. Go ahead.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Great. Thank you.

CHAIRPERSON JONES: No further questions.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Okay. So then we will move on to the next item,

Program Reviews. Public Markets, Annual Program Review.

Mr. Eliopoulos.

2.4

CHIEF INVESTMENT OFFICER ELIOPOULOS: Terrific. Thank you, Mr. Chair.

(Thereupon an overhead presentation was presented as follows.)

CHIEF INVESTMENT OFFICER ELIOPOULOS: And our Public Asset Class heads are making their way up here. And while they do that, let me just make a brief introduction to this item, the Public Markets Annual Program Review.

I think as the Committee is aware, we've taken a new approach to our program reviews this year. We're presenting the Public Market Asset Classes together, both global equity and global fixed income together this month. And then in November, we'll present the Private Market Asset Classes together.

Another change that you will see is that we're following the initial presentations by Mr. Bienvenue and Mr. Ishii will be presenting several components of the public market asset classes for a bit of a deeper dive into those programs, as well as introducing you, the Committee, to some of the very talented investment managers and directors within the Investment Office.

On to the program review. Public equity and

fixed income together comprise about 74 percent of the total fund, and they share some common characteristics. Apropos to the conversation that just concluded, they are primary internally managed. In addition to that, they have a reasonable liquidity in most market environments, they have readily available price discovery, and certainly are subject to some of the short term and market behavioral biases that we see from time to time in the public markets.

Our Public Equity and Fixed Income Programs also have some important differences. Our Global Equity Program is primarily index-oriented management using a most typical capitalization-weighted index. Our Fixed Income Program in contrast is 100 percent actively managed in a index-aware manner.

Overall, CalPERS has a very impressive internal management capability in our public asset class teams.

And with that, I will turn it over to first Dan and then Curtis for program reviews.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Thanks,

Ted. Dan Bienvenue, Managing Investment Director of

Global Equity.

So as Ted highlighted in July, and then again in August, the international markets especially, but global equity markets were very challenged. And again, much of

the challenges came in the international side, and specifically currency returns. And we'll cover that more -- in more depth later in the program.

But a benchmark that was down four percent, obviously it was a challenging year from an absolute return standpoint.

--000--

MANAGING INVESTMENT DIRECTOR BIENVENUE: That said, from a relative return standpoint, it was actually a pretty positive year for global equity, beating the benchmark by 60 basis points with a negative 3.4 percent return versus that negative 4 percent benchmark return. And again, that positive 60 basis points was on about 50 basis points of active risk. So those were numbers from a relative return standpoint that the global equity team was quite happy with.

The performance was achieved, of course, at a very low level of cost consistent with Investment Belief 8. As we've all discussed in the past, we're definitely very focused on the fees that we pay to our external vendors. And then as Ted mentioned, more than 80 percent of the portfolio is internally managed, which, of course, represents a very cost -- a compelling cost proposition.

--000--

MANAGING INVESTMENT DIRECTOR BIENVENUE: So that

takes us to the portfolio. And on slide 3 here you can see some of the ways that we look at the portfolio. Consistent with Investment Belief 7, first of all, we really want to make sure that we're only taking active risk, where we believe we'll be compensated for that active risk. So we very much run the portfolio very tightly and we scrutinize the risks we take very carefully.

And then in line with Investment Belief 9, as we know, investment risks and risks in general are very much multi-faceted. And so we try to really look at the risks in the portfolio through a numerous -- through numerous lenses.

And on this slide, you can see two of those -two of the graphics that we use in managing the portfolio.

On the left is what we call our risk hub, which shows some
of the lenses that we can look at our active risk through.

You'll note that each of the lenses actually will sum to
31 basis points.

Now, that's not what you necessarily see on the hub, but each of the sort of spokes of the hub, if taken all the way out, you can see that they will sum to the 31 basis points in the portfolio, but it allows us to look at that 31 basis points through various lenses, those being geographic, sector and industry, factor based, macro

based, and then even strategy based.

On the right, you can see the actual active exposures in the portfolio -- or those active exposures both in geographic and super sector terms. And in aggregate, you can see that the portfolio is run at a very low level of active risk per Ted's discussion, consistent with, of course, our policy and with the needs of the plan. And right now, the portfolio is very defensively positioned, again in line with some of the previous comments made in this discussion today with a lower beta and higher quality than about a year ago.

--000--

MANAGING INVESTMENT DIRECTOR BIENVENUE: Now, the Investment Committee has heard me say this, and certainly the global equity staff hears me constantly say this that we're all about managing the portfolio. And by the portfolio, I mean, not only the holistic global equity PERF exposure, but also the affiliate portfolios. And we'll hear more about the affiliates later as well. But also we have to manage the business model that supports the manage into the portfolio. So I thought we'd give a brief update on some of the developments in the business in this past year.

So some of the accomplishments, and there's been a number of accomplishments we figured we'd highlight

through. So some of the accomplishments of fiscal year 2015-16 include the launch of the Executive Services and Strategy or ESS, and we'll hear more about ESS later in the program; more work on our capital allocation and governance framework. Of course, with Investment Belief 6, we know that risk and return will be largely driven by allocation decisions. So we wanted to really broaden and deepen the inputs and the expertise that's brought to bear in our allocation decisions in management of the holistic portfolio.

Finally, we've rationalized a number of strategies, closing unnecessary strategies, and then launching needed strategies. And this, of course, is consistent with Vision 2020.

In this upcoming fiscal year, we're going to focus on a number of things, but some of the initiatives include enhancing our factor allocation framework, both structural and dynamic, exploring new strategies. Of course, we've done type -- quite a bit of talking about our ESG strategy work. But then there's also work around drawdown mitigation consistent with the portfolio priorities work and then others as needed.

And then finally, technology enhancements.

Certainly, in the public markets business, technology has become really an integral part of running the business,

and we're going to continue to look to develop and leverage our technology.

So there's more work in Artemis development.

Looking to possibly broaden that for use at the global equity and even the PERF level. We're going to build a transition management technology, that we expect to deploy in the next six months or so. And finally, lots of work in ESS. That is going to be very technology focused. And so there's a lot of work on the ESS technology front.

So that's kind of high level executive summary of global equity. And with that, I'm happy to either answer any questions or turn it over to Curtis.

CHAIRPERSON JONES: Okay. Just a minute, Dan. Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Yeah. Can you go back to 3 of 26, your portfolio positioning, 127 of the iPad. You've used this chart before, and I'm -- or -- and I'm still not sure that I understand it. Can you try to explain again, because if I add up all those numbers, I certainly get more than 31. I mean --

MANAGING INVESTMENT DIRECTOR BIENVENUE: You're referring to risk hub, the graphic on the left there?

COMMITTEE MEMBER JELINCIC: Yes.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Okay. Yeah, so basically what those are is they're -- each of

the sort of spokes of the hub, so to speak, will add to 31 if taken all the way out. So we're only -- you know, we only have room to show two or three of the things that are contributing to the 31 in each spoke. But take, for example, the portfolio risks, right -- I guess probably better would be to take at the bottom left some of the regional risks. If you were to add all the regional risks up, and again if you took it all the way out, it would add to 31. So the same thing goes for the country, for industries, for the sector, et cetera.

Does that help?

COMMITTEE MEMBER JELINCIC: So each spoke has 31 basis points of risk in it.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Of active risk in it, correct.

COMMITTEE MEMBER JELINCIC: And you've only listed the key ones.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Correct They're in sort of diminishing order away from the center of the -- away from the hub of the hub -- the center of the hub.

COMMITTEE MEMBER JELINCIC: Okay. I think I understand what it -- actually, I'm sure that I don't understand what it means, but it's probably going to take more time than we want to spend now. So at some point,

I'd like to give you a call and have you walk through it, if that's okay?

CHAIRPERSON JONES: Yeah, that's fine.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Happy to, absolutely.

CHAIRPERSON JONES: As a matter of fact, I think I'll join him.

(Laughter.)

MANAGING INVESTMENT DIRECTOR BIENVENUE: Okay. Certainly happy to.

CHAIRPERSON JONES: Okay. You know, there's just one other comment. Back to your chart on 2 of 26, 126 of the iPad. Looking at the statement and then looking at the excess return numbers, when we say significantly positive, and then we look at the numbers and they appear to be small like 0.6 1 year, 0.3 percent 3 years. While the percentage is large, would you just comment on how big a number that is, so that the takeaway is not very small -- the percentages appear to be small, but the numbers are huge.

MANAGING INVESTMENT DIRECTOR BIENVENUE:

Certainly happy to. So I guess two main things there. One has to do with the active risk. And, of course, you know, the information ratio, which is one the metrics. It's certainly not a sufficient metric, but it's

one of the metrics that we look at. The information ratio is the active return divided by the active risk.

So, for example, when the 1 year at 0.6 percent positive return at 0.5 percent active risk, that's an information ratio of 1.2. Now, at lower levels of active risk, those information ratios get a little bit fuzzier. But certainly, information ratios in the 0.5 to 1 range, I think as Wylie can attest probably from his time at his previous employer, those are -- those are pretty good information ratios.

And we look across there, and we see, you know, in the 5-year number, it's about 0.67 percent, the 3-year numbers is about a 1 -- an information ratio of 1, and the 1-year is about 1.2. Those are numbers that we're very happy with.

The other thing is to think about the dollars that those represent, right? So \$150 billion a 1 percent outperformance would represent, of course, \$15 billion, so half of a percent of outperformance would represent 7½ billion dollars.

So while half of a percent doesn't seem like a big number when we think of it is 7½ billion dollars.

Those are numbers that we're -- that we're very gratified by.

CHAIRPERSON JONES: Thank you.

Mrs. Mathur.

COMMITTEE MEMBER MATHUR: Thank you.

If we could go to page 2 of 26 that's, the -- oh, I guess we're already on it. That's the summary. Your headline there is that the challenge -- it's a challenging environment for absolute returns, but that relative returns are positive, which is -- so what this says to me is that we -- you know, that our work around financial market reform, sustainability of financial markets, investments in the real economy are all really important, because with absent that, then, you know, volatility and the unsustainability of the current financial system might cause us to continue to be operating in a challenging environment for the next decade or longer.

And no matter how well we do versus the market, we're not going to hit our nut -- we're not going to cover our nut on relative returns. We only cover our nut with absolute returns.

So I say that as sort of preface to my comments. I recognize the timing of this particular review comes just a month after we adopted our ESG strategy, and the restructuring plan has not yet been implemented. We're moving some of that into your shop, Dan, and also into Wylie's. But if you go to page 10, which is in the appendix, and you talk about program investment

philosophy, I expect next year for this to look a little bit different and to talk a little bit more about long-term view, and active ownership and some of the components that are going to be sort of integrated more into the Global Equity Program. And maybe you can speak to that and how you see it changing for next year.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Yeah, absolutely. I mean, we certainly are looking forward. We've brought the governance functions now into -- the corporate governance type functions, proxy voting, et cetera into global equity, we're going to get the people down onto the floor here physically moved here soon. So it's very early days as we work our way through. But it's certainly the case that we're going to be focused there.

Now, we also have to be fair, and as we've discussed before, we're, you know, between 30 basis points and 50 basis points of each company. Even using our -- some of our partnerships, while that lends power, there's still challenges there. And it is the case that what the economy provides, we can do the work that we can do to have an influence. But to some degree, we operate in the markets that we operate in, and we have influence, but not control.

So our goal will be to really just try to have the influence where we think we can be successful and try

to, you know, sort of maximize the economic pie, and then from a relative return standpoint try to maximize our sort of component of that pie.

COMMITTEE MEMBER MATHUR: I appreciate that. But certainly if all large investors sort of stuck our head in the sand, then clearly we're going to have no impact on the real economy. But on the other hand, if we work -- if we all work together and collaborate in various ways, I'm not saying that we can have an absolute impact and completely turn the shop around, but I just -- I guess I would argue more on the side of being an active participant in the markets and in the companies that we own in a constructive way, and in a way that is meaningful. And I think that is -- that's consistent with sort of what we've been -- what we've been doing to date.

But thank you.

MANAGING INVESTMENT DIRECTOR BIENVENUE: And, Mr. Jones, if I can just really quickly --

CHAIRPERSON JONES: Sure.

MANAGING INVESTMENT DIRECTOR BIENVENUE: -- I just realized that I said 15 billion. At 150 billion, one percent would be 1.5 billion. So a half a percent would actually be 750 million. So I did -- I misspoke early. Apologies.

CHAIRPERSON JONES: Okay. Still a big number.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Yeah, still a big number, but --

CHAIRPERSON JONES: Not that brig.

MANAGING INVESTMENT DIRECTOR BIENVENUE: -- off by a digit.

CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Staying on 10.

Basically, 59 percent of the portfolio is index oriented strategies. Are those all market cap indexes or some other type of index? And it's the -- I'm also going to ask about the 14 percent of the portfolio that's alternative betas, because many of them are index types. And it's just that it's not a cap-weighted index. You're indexing based on something else.

And how much of the active risk that you've identified in the last bullet is actually coming from our alternative beta portfolios?

MANAGING INVESTMENT DIRECTOR BIENVENUE: Okay.

So the 59 percent is cap weighted index oriented, right?

So that -- and we -- of course, we used the term index oriented because we don't fully replicate anything. We do believe that we can add value at the margins, even in the index-oriented.

The 14 percent is in the alternative beta. Those are -- those are -- I like the term alternative betas,

because I don't really consider them indexes necessary.

They're active return away from the -- you know, from what is our holistic benchmark. That said, they are managed in an indexed-like way, but versus, you know, an alternative model, so to speak.

2.4

COMMITTEE MEMBER JELINCIC: And how much of the active risk is being used up by those beta strategies, or do you know?

MANAGING INVESTMENT DIRECTOR BIENVENUE: There are a lot of cross-product effects there. If you look on actually slide 12 --

--000--

can see that in the alternative beta bucket, that has about 153 basis pop of active risk, but that's on a 14 percent of the portfolio, so -- but again, there are some sort of canceling effects. So there would be a lot of assumptions in the calculation of that number. But I think you can probably assume that -- you know, again 14 percent of 153 basis points with a lot of cancellation -- you know, I'd really want to run that through a risk model candidly just to come up with a better answer to that number.

COMMITTEE MEMBER JELINCIC: Okay. Thank you. CHAIRPERSON JONES: Ms. Paquin.

ACTING COMMITTEE MEMBER PAQUIN: Thank you.

On page 4, slide 4, can you explain a little bit what you mean by the enhance factor allocation framework for this coming year? It's listed as one of the initiatives.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Right.

So this -- this speaks really to what Mr. Jelincic's question was that some of those alternative betas actually give us factor exposure, so whether that's a value factor or a quality factor momentum or something like that.

We believe the we want systematic exposures to those factors. And we have built our -- built the portfolio to have some systematic exposure, but we want to continue to sort of sharpen our pencil on exactly how much systematic exposure we want to factors like value, et cetera.

But then we also believe that there is some ability to dynamically time those factors. And we don't think that we're going to -- we don't think we're going to pick the highs, we don't think we'll be able to pick the lows, but we do think that we can run some timing models as exposures get multi-standard deviations away from norms. We think that we can sort of time some of that, so that will be some of the dynamic factor work.

ACTING COMMITTEE MEMBER PAQUIN: And have you

done a test program already or is this something that's under development for this coming year?

MANAGING INVESTMENT DIRECTOR BIENVENUE: It is something that we've been doing somewhat, and we want to just really sort of further our work in this space.

ACTING COMMITTEE MEMBER PAQUIN: Thank you.

CHAIRPERSON JONES: Okay. Thank you. One additional question on page 11 of 26, 135 iPad. I'm looking at the United States holdings in 55 percent, and I always thought our holdings were greater internationally than when compared to the U.S.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Yeah. So that has to do with the returns recently. So between the strengthening U.S. dollar and a stronger U.S. market, when you're in a, you know, a cap-weighted portfolio, it results in the U.S.'s weight going up. So you're right, where about 3 to 5 years ago the U.S. was less than half of the portfolio now, it's more than half of the portfolio at about 55 percent.

CHAIRPERSON JONES: Okay. Thank you.

Okay. Move on. Mr. Ishii.

MANAGING INVESTMENT DIRECTOR ISHII: Good morning. Curtis Ishii, Managing Investment Director, Fixed Income. And give me two seconds to -- so I can start.

(Thereupon an overhead presentation was presented as follows.)

MANAGING INVESTMENT DIRECTOR ISHII: Fixed income is -- runs about \$80 billion in three different programs. As I said, it's 100 percent actively managed, 93 percent of the assets are internally managed. We're getting to -- there will be a return graph here fairly soon.

The first program is GFI, which is representing about 20 percent of the total fund. GFI is really composed of long maturities, which are the chief attribute for providing diversification to the equity risk. And I think you saw Wilshire talk about this. Our index is about 50 percent longer than your traditional index that you see out there. And this was done back in the early eighties. And it was -- it's proved out fairly well.

The -- how do I get to fixed income?

Okay. I can keep going.

What you'll see is that -- there we go.

--000--

MANAGING INVESTMENT DIRECTOR ISHII: -- on the top section is the global fixed income. And you can see that the absolute returns are very high and excellent, and the relative returns are more index like. But long term, you can see the effects of a secular decline over 30 years in interest rates, and it has produced some spectacular

returns on an absolute basis, and very strong relative returns.

The middle area is the inflation assets. It represents about 6 percent of the total fund. And this asset class does well in high inflation, or higher inflation environments. And you can see that it's got weaker returns here on an absolute basis, which is reflecting of a low inflation environment that we've had over the last 10 years actually. But the relative, or excess, returns has been really, really good. The staff has brought a lot of value to the portfolio.

The last area is the liquidity portfolio. It represents about 2 percent of the fund. It's composed of short-term maturity -- shorter term maturities that can be easily converted to cash. You can see the kind of low absolute returns, and that's really reflective of a fed with a near zero interest rate policy. The excess return this last year has been pretty decent.

--000--

MANAGING INVESTMENT DIRECTOR ISHII: In terms of risk profile, you can see that the portfolio -- and the really simple thing to look at is yield. Yield can kind of give you and idea of the profile of a fixed income portfolio. And you can see that we've got 40 basis points of return in excess of the benchmark. And that's really

relatively low from a historic basis.

The other one is that that graph called percent duration. It's something I look at. And it's a combination of your portfolio duration relative to the index as a percent. And you can see that the relative deviations from the index is pretty small. It's within two percent. And that's really small. If you look historically during times when there's a lot of opportunity, we could be five to 10 percent different than the index.

Lastly, this thing has changed even in the last 2, 3 months, where we have even reduced our positions even more in the investment grade and the high yield area. So these numbers reflected as 6-30, and they're even lower as we see -- as it is today.

Excuse me, the middle one is the inflation assets. And you can see that that one we had at then end of as 6-30 an overweight in commodities. We have since switched that more recently, and now we're underweight commodities by about five percent. So you can see there's quite a bit of active management in this area.

In the liquidity area, I think you'll see a very large State Street STIF position. And really, that's reflective of there's not a lot of opportunities right now. You'll -- we'll talk a little bit later about some

of our plans in which we plan to replace the State Street STIF, which is presently, if you aggregate all the places where it's at, it's over \$20 billion. And we have plans to, next year, bring some of that internally, probably over the next couple years. We hope to get about at least 70 percent of that. And you'll see there's some savings that will be produced in terms of about \$9 million.

COMMITTEE MEMBER JELINCIC: Did you say 7 or 70 percent?

MANAGING INVESTMENT DIRECTOR ISHII: Seventy percent of that, and -- but more importantly, I think the drivers that we will have is there's going to be greater transparency and a better ability to manage the risk. And that's really the driver of bringing a lot of this stuff inside.

--000--

MANAGING INVESTMENT DIRECTOR ISHII: So next year -- last year, we did a couple of initiatives in the liquidity area, which is the top two. And really, they were trying to develop a better cash flow forecasting method. And it's developing the initial work to develop this internal STIF within Calpers.

The other group of work is really kind of foundational work for this new opportunistic credit initiative. And we went through a number of different

committees to get some approvals to buy the first lost pieces of the collateralized loans. And those are expected to return, somewhere we hope, between 10 to 15 percent. And it's going to be run inside.

And then there's the enhanced cash initiative, which also will be moving over to this group, which we think can add about one percent in addition to our indexes.

For next year, we're going to really roll-out a couple of the initiatives that we worked last year on to -- on the foundational aspects. The CalPERS STIF, which I told you is -- you know, we're going to try to replace the \$20 billion that -- or partially replace the \$20 billion that State Street does, and the opportunistic credit. And I'm going to help that group develop policies and things that will be presented to the Board.

The ESG area, most of our work is going to be in the carbon footprinting of the portfolio and GFI. And we'll be coming back and notifying the Board of our exposure. And then lastly, we're going to be working on currency and looking at currency, how to put that within a framework in the private markets. And I'm going to help sponsor a group that will be looking at this.

Are there any questions?

CHAIRPERSON JONES: Yes. Mr. Moore.

ACTING COMMITTEE MEMBER MOORE: I had another question about your Short-Term Investment Fund. You said the plan is to bring 70 percent of it in-house. Why not 100 percent? Why not go -- what's the function of leaving some of it with State Street?

MANAGING INVESTMENT DIRECTOR ISHII: So it's -it provides some liquidity. It could -- I guess,
initially we're going to do about 70 or so. It could turn
out to be more, but there's a certain amount of
operational liquidity that's -- leaving money with the
custodian provides quick cash to handle any kind of
emergencies that are needed. But it's another
alternative. And the way we look at it, it is like
another mutual fund, in essence, for us.

ACTING COMMITTEE MEMBER MOORE: Thank you.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: As a commercial -- Wylie Tollette, Investment Office staff.

As a commercial bank, State Street also has access to, for example, the fed window and a variety of clearing mechanisms that we don't have access to as a pension fund. So it's important -- it's going to be important for us to maintain the relationship with State Street and to continue to keep some operational liquidity there just to basically get our job done.

CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: On the issue of this STIF, unless things have changed, doesn't the Treasurer require us to keep some money over there, so we couldn't bring it in-house, if we wanted?

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

There's not a requirement, but it's a smart thing for us to do. And we have a great relationship with the Treasurer's Office. And that relationship is really managed primarily through the Finance Office. They essentially control the checkbook for CalPERS. And that cash at the Treasurer's Office is essentially the -- sort of the month-to-month checkbook.

COMMITTEE MEMBER JELINCIC: Okay. And I'm not arguing it was a bad thing. It's just that, you know, it used to be required. Now, I'm hearing it's only recommended.

The -- on ESG, Curtis, can you talk a little bit about how you actually are currently incorporating it?

You said you're going to identify the carbon footprint.

But how does ESG currently affect the portfolio, and what do you anticipate going forward?

MANAGING INVESTMENT DIRECTOR ISHII: So there's a fairly well documented process both in the sovereign and in corporate high yield area. In certain industries, carbon footprinting is really important. I'll give you an

example. The utility industry.

And so it's very important to understand, for instance, coal and how -- what's going on, what are kind of the cheaper alternatives and things of that nature. So it's one of the risk factors. It's always been one of the risk factors. And we've written up some documentation last year of what we've done.

What we're going to do this coming year is take the process that was developed in the equity group and identifying what companies are -- you know, have a certain exposure to this area, and then report back to -- on our holdings to the Board.

Spending significant resources on dialogue with the companies, and trying to understand what they do. And although, we say we're not trying to push them, we are trying to push them. Is the fixed income group, talking -- dialoguing with the companies about what they are doing and why they are doing it? And I realize you have a different set of influences than an equity holder, but you do have some influence.

MANAGING INVESTMENT DIRECTOR BIENVENUE: So I'll take this as the chair of Governance and Sustainability Subcommittee. Really, one of the points that Governance and Sustainability Subcommittee is try to sort of

centralize where we are putting our effort and our focus.

And Lou Zahorak is an Investment Director in fixed income.

And he's fixed income's representative on that

subcommittee. And he's definitely very much a part of

that conversation.

Interestingly, we've actually also nominated -we put Lou forward to potentially serve on one of the
regulatory sub-bodies, because Lou is just -- he knows
this. He's got a passion for ESG, and he knows, you know,
accounting, and the sort of tearing a part of balance
sheets about as well as anybody.

The last place we're you'll see ESG, I would say reflected in the GFI Portfolio is around manager expectations. And we're certainly expecting -- you know, along with global equity, certainly fixed income and the private asset classes will be engaging in the manager expectations work.

COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Ms. Hagen.

ACTING COMMITTEE MEMBER HAGEN: Thank you.

Good morning. I just had a question about the STIF as well. I was wondering sort of the reason why, is it -- are we -- are we moving towards this or creating a STIF because we plan to offer a separate account option for public trusts, or are we just -- is this more towards

just managing more internally?

MANAGING INVESTMENT DIRECTOR ISHII: I'll take it. Although we do save money, this wasn't the principal driver. The principal driver is really looking at -- when you run things inside, you know what you own. When you run it through a fund, you're less in control, and you can kind of see what they own, but your risk tolerance is lower in an externally managed versus an internally managed.

So it's -- from my motivation, it's more risk mitigation. And I'll give you an example. During 2008, we had quite a bit of State Street STIF. And as we began to liquidate it, it created some problems. We owned, I think at one time, about 40 percent of what they had. And as PERS started to liquidate quickly, it started to affect their liquidity.

And I think that if you run it inside, what we plan to do is a more tiering of the portfolio, so that the money will be available. And it's not going to be driven more by excess return, but really having the capital there. And if you're running money -- and I'll be sitting here listening to the discussions of liquidity, because liquidity just doesn't dry up overnight. It's over time. And as that begins to happen, what we would do, if we're running it inside, is shorten up the maturities, have it

more available, so that, you know, PERS can do something with the money in case there's a drawdown in terms of the markets.

ACTING COMMITTEE MEMBER HAGEN: Thank you.

CHAIRPERSON JONES: Mrs. Mathur.

COMMITTEE MEMBER MATHUR: Thank you, Mr. Chair.

So I know we're setting up this new opportunistic group or -- and it's noted here. Could you talk a little bit -- I know it says a little bit about establishing sort of the policies and the structure and framework, but what -- what is it going to look like when it's up and running and how long is it going to take to get there?

CHIEF INVESTMENT OFFICER ELIOPOULOS: Well, process-wise, we need to hire the new Managing Investment Director for that group, as well as a new Investment Director, and as Curtis alluded to, shift some of the existing staff into the staff positions to populate it.

So I think it will look like a group of about 8 to 12 investment professionals, you know, headed by a MID and ID really principally focused at the two opportunistic credit strategies that Curtis highlighted. But we have, you know, a lot of work to do to put the policies and put the parameters around the approach.

I don't know, Curtis, if you want to say anything more about the substance of the CLO and cash enhancement

fees --

MANAGING INVESTMENT DIRECTOR ISHII: Yeah, I think that --

CHIEF INVESTMENT OFFICER ELIOPOULOS: -- but -- logistically, that's what it will look like.

COMMITTEE MEMBER MATHUR: Thank you.

MANAGING INVESTMENT DIRECTOR ISHII: Those two are things that we've already done, and that staff has done. So those will transfer over.

There's been a lot of work looking at other types of things to do. The group will also be taking on some of the private equity credit intensive strategies, and trying to understand and figure out how do they want to attack those.

And then there's a number of other areas. As the banks and Dodd-Frank has forced many of the banks out of areas, certain areas that seem to be lucrative, we might -- I would assume that this person would look at, and that's what we looked at this year, a number of different alternatives.

I think we identified some crazy number, like 70 odd different types of things that we could invest in. So it's quite extensive. So this new area will have quite a bit of work in trying to determine which areas do they want to attack, when do they want to attack it, you know,

they've got to hire a certain number of people, is it internally, external? There's a number of different issues.

COMMITTEE MEMBER MATHUR: Okay. So it certainly has a several year ramp-up period. Maybe a perpetual ramp-up period. But all right, it sounds interesting. Thanks.

CHIEF INVESTMENT OFFICER ELIOPOULOS: I'd expect you'll see us coming forward with, you know, the new leadership team, the new MID and ID sometime in this next fiscal year with a fulsome briefing to the Committee as to the alternatives and the plans.

COMMITTEE MEMBER MATHUR: Thank you.

CHAIRPERSON JONES: Okay. Thank you.

Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Curtis, if I heard you correctly, one of the things we're looking at is replacing the banks in both investment and commercial in areas where they had provided liquidity, because presumably we think we can get paid for providing liquidity in those areas. Does that suggest that when we look at our asset allocation, you know, not necessarily this week, but a couple years down the road, that we may need to build more liquidity into the portfolio to be able to run the risks that the banks are being pushed out of?

MANAGING INVESTMENT DIRECTOR ISHII: It definitely argues that understanding the amount of liquidity and how you're going to spend it needs to be developed. And that is -- we worked on this year what we call the operating liquidity, which is trying to forecast a better forecast and figure out what areas we could improve.

The next step will be to develop a model or someway to evaluate all the various uses of liquidity within the fund, and then how do we spend it? What's the framework to develop? So credit enhancement is an example, it could use up liquidity. How do we allocate to that versus the enhanced cash versus whatever derivative strategies, and things of that nature?

So that foundational work will need to be done. And it will be -- you know, you'll be able to spend so much of this liquidity. And liquidity is going to be, not just return, is going to be one of the paramount issues, especially as Ted has pointed out, when you're in a negative cash flow situation.

COMMITTEE MEMBER JELINCIC: But to the extent that we provide liquidity to the market, our intent is to charge them for it.

MANAGING INVESTMENT DIRECTOR ISHII: Correct, but the liquidity that we're going to use, or I think that

this group is going to develop, are enhanced cash. So you would sell, for lack of a better term, let's say S&P 500, 3 and then you would replace it with the strategies that are 4 expected to return, probably over one percent than what 5 you could in cash. That provides you an S&P plus 100. 6 And those kind of -- you can only do so much of that 7 strategy. But it is a scalable strategy. It's something

1

2

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

support.

been doing variations of this for 15 years. So I think that this is something that we propose to our investment management group and receive some

that CalPERS has the experience. It's been doing -- we've

COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Okay. Proceed.

MANAGING INVESTMENT DIRECTOR ISHII: Okay. going to transfer this over to Simiso and Mike who have a discussion of the international investments in the public area, and -- I mean, in the public markets.

INVESTMENT MANAGER NZIMA: Thank you, Curtis.

Good morning. My name is Simiso Nzima. And I'm an Investment Manager in Global Equity.

INVESTMENT DIRECTOR ROSBOROUGH: And I'm Mike Rosborough, Investment Director in Global Fixed Income. Ι manage the international and emerging markets risk as well as the inflation program for the fund.

--000--

INVESTMENT MANAGER NZIMA: I'll walk us through the reasons why we invest in international markets, and Mike will talk about our positioning. So basically, there are two broad reasons why we invest in international markets, diversification and growth.

Diversification is the whole idea that you do not put all your eggs in one basket. Investing in international markets allows us to move away from the home country bias and present our investment opportunity set, thereby giving us exposure to different market and economic forces.

The returns of domestic and international markets are not perfectly positively correlated, as can be seen on the top left chart there. Any time that you have assets that are not perfectly positively correlated, combining them in a portfolio helps our diversification, enhances the diversification of that portfolio. The lower the correlations, the higher the diversification benefits.

Furthermore, when you think about assets, it is hard to actually predict when a particular asset is actually going to outperform in any given year or to have one asset continuously outperform other assets on a continuous basis, as shown on the top right chart. So as a result of that, it makes sense actually to combine, you

know, different risk chains, different markers to actually get the diversification benefit.

The second reason why we invest in international markets is to capture global growth. As the Chair of the Board did refer earlier to the fact that U.S. is about 55 percent of global equity in terms of the capitalization weighted. But if you look in terms of aggregate GDP, U.S. is only about 25 percent of global aggregate GDP.

So for us to be able to capture the growth that's provided by the rest of the world, we actually need to invest in these markets. Factors such as rapidly rising productivity, rapidly rising labor force, as well as increased investment by international firms, if led to a situation where you have a higher and higher contribution of aggregate world GDP coming from the international space, as well as the higher and higher contribution to world GDP growth rate.

Nonetheless, having set instead of the case for international investments, I would like to actually acknowledge the challenging times that we've actually faced in the last couple of years. However, when we think about this, we think the structural case for investing in international markets remains strong and we think about Investment Belief 2 --

--000--

INVESTMENT MANAGER NZIMA: -- which says a long-time investment horizon is a responsibility and an advantage. So we still believe that there's a structural case for us to continue to invest in international markets.

At this point, I'll hand off to Mike to talk about our positioning.

--000--

INVESTMENT DIRECTOR ROSBOROUGH: Thank you, Simiso.

In equities, we've already discussed we're now slightly below 50 percent of our weightings in international, and that's really been driven by the outperformance of the U.S. equity market and the strength of the U.S. Dollar in the last couple of years. In the fixed income and inflation spheres, we've had a Long-standing commitment to international investing in fixed income that goes back to the 1980s.

It's 10 percent of the benchmark of the GFI program. As the Board will remember, we presented in 2013 to change that from a market cap weighted to a GDP weighted, so that shifted the components of the index more in the direction of Europe and the emerging markets and away from Japan. The general idea of going to a GDP-weighted was to reward not those who borrow more, but

those who actually probably borrow less and have greater and growing capacity to pay. And the currency exposure is not hedged in the international program. It was a diversifying component, just as it is in equities.

In the inflation program, the exposure is 25 percent. We've identified in our own work that actually having currency exposure, 25 percent currency exposure enhances the inflation protection of the inflation program, and so we've kept it there.

We did change the benchmark as well in 2013 to broaden away from the initial 5 non-U.S. countries to a broader mix of all countries that issue inflation-linked securities that are investment grade and above.

So on net, the major exposure of the funds to international investing still remains very dominant on the equity side, much less so on the fixed income inflation side. As you'll see, 86 percent of our international exposure comes through equity, about 8 percent through inflation, and about 6 percent through international fixed income.

As the graphs on the bottom of the chart show, we have in the equity space, because of the general volatility and return characteristics of equity, it tends to dominate the currency component over the long term. In fixed income, which is a lower volatility investment, that

currency does become a greater component of the volatility when you move internationally than in the equity space.

--000--

INVESTMENT MANAGER NZIMA: Just to recap, we are investing in international markets for diversification and to capture global growth. And as Mike did state, we actually gain most of our international exposure via global equities.

At this point, we'll take any questions.

CHAIRPERSON JONES: Okay. We have one.

Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Why so little international fixed income? You know, if we're looking for a world-wide portfolio, why not more?

MANAGING INVESTMENT DIRECTOR ISHII: So the reason is when we looked at the U.S., the U.S. has been disintermediated quite a bit in the financial markets, so another -- a lot of very well developed investment grade corporate market, developed high yield market, and well developed mortgage market.

Those markets have provided some strong returns over long periods of time. The international markets aren't as developed in many of those areas. The high yield market is beginning to move, but it's really the credit markets overseas, especially in Europe, is really

one dominated by banks. And so the opportunity set really is not as strong.

And so it's really a -- what you have to invest in is governments. And governments, when you looked at historic returns, aren't really strong, which may argue why even invest there at all? And the reason we do invest there is to get a look at the globe. We viewed about 10 to 15 years ago that the world was moving away from a U.S.-centric one to one in more global. And we will not be able to get a view on the global rates unless we participate. And so that's why we have at least 10 percent.

And this has helped shape our views in the last 3 to 5 years about interest rates. You used to hear us talk quite a bit about, and Tara used to tell us all the time that we should keep going to a shorter duration index, and we should go to, you know, cash, or something of that nature.

And really, the argument really was a global one. If you look globally, rates were falling. And U.S. was really -- as low as rates were, it was cheap. And so it -- a global view we view as very, very important, but 10 percent is enough for us to get that view. We get it from having Mike and his team, and then we also have obviously international managers who give us a pretty good

view of that, too.

2.4

COMMITTEE MEMBER JELINCIC: So from a fixed income viewpoint, the international investments is largely an intelligence operation, really rather than a money investment.

MANAGING INVESTMENT DIRECTOR ISHII: Mike wouldn't say. That's why I won't let him speak.

(Laughter.)

MANAGING INVESTMENT DIRECTOR ISHII: But I think that from a Calpers standpoint, I think it gives us a lot of looks into the world. I will tell this. The other thing that we probably -- I just looked at it from a fixed income standpoint. But it struck -- Mike is also on the Asset Allocation Subcommittee. And his team provides quite a bit of in-depth review of the world. And having exposures and managing portfolios globally also helps shape that.

So 10 percent is what, it's 2 percent of the total fund's assets, very small, but it can have a big effect.

COMMITTEE MEMBER JELINCIC: It's a big dollar number though.

MANAGING INVESTMENT DIRECTOR ISHII: Yes, it is CHAIRPERSON JONES: Okay. Thank you.

25 COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Okay. So how long is the next present -- part of the presentation?

Okay. Move forward.

CHIEF INVESTMENT OFFICER ELIOPOULOS: All right.

The next presentation is our execution services team, Don

Pontes and Brian Leu.

INVESTMENT DIRECTOR PONTES: Great. Thank you,
Ted. Good morning. Don Pontes, Investment Director,
Execution Services and Strategy.

INVESTMENT MANAGER LEU: And Brian Leu,
Investment Manager, Executive Services and Strategy.

INVESTMENT DIRECTOR PONTES: So Brian and I really appreciate the opportunity to be here to provide an update on the progress and the vision going forward of the newly established Execution Services and Strategy, or ESS Group.

--000--

INVESTMENT DIRECTOR PONTES: As you may recall, this group was launched late last year by brining together key members of global equity, securities lending, and the risk management program. The intent was really to create a cross-asset hub within the Investment Office focused on fostering more collaboration amongst the asset classes, as well as increased integration and risk management across the entire Investment Office.

And so while we're only early stages, less than a year into the development, we have made some meaningful progress in a number of key areas, and we've really began to clarify the vision for ESS, as well as the role for the platform within the Investment Office.

I'll wait one second. We have a graphic I'd like you to see.

MANAGING INVESTMENT DIRECTOR ISHII: It's coming.

INVESTMENT DIRECTOR PONTES: Excellent. Thank

you.

CHIEF INVESTMENT OFFICER ELIOPOULOS: While we're experiencing our technical difficulties, if you'd just look on attachment 5, it's page 6 of 19, is where we'll be headed.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:
Page 214 of the iPad.

INVESTMENT DIRECTOR PONTES: Great. Appreciate it. Thank you, Ted. So if you take a look at the graphic, you can see that we think it does a very good job of visualizing ESS's ultimate role within the Investment Office. And a couple things to point -- there we go. Thank you very much.

A couple things to point out is that at the center of this platform, it is not equity -- it is not Execution Services and Strategy in isolation. In fact,

it's and equal partnership between the ESS group and the Asset allocation function. And the idea there is that this collaboration then works to be highly integrated across all asset classes within the Investment Office, and they also work together to support a number of key plan level mandates.

As you can also see -- oops, there we go. As you can also see, another point to highlight would be the red oval basically encompassing in this partnership, and that is the function of risk oversight. So the idea with risk oversight, we view this as a critical and integral part of the robustness of the ESS platform.

In fact, we have independent members from the risk management team who sit within ESS, sit within the execution desk, in fact. And the idea that the potential there is really to strive towards improving risk management, particularly related to the use of derivatives, giving a greater ability to both monitor and manage aggregated plan level exposures.

So hopefully that gives a good understanding in terms of the structure of ESS, the role of the platform within the Investment Office, in particular, the partnership between ESS and asset allocation, and the importance we're placing on improved risk management at the plan level.

And so with that, we'll have Brian Leu, the head of execution for ESS give some detail with regard to the four categories of mandates that ESS will be focusing on going forward.

INVESTMENT MANAGER LEU: Right. So thanks, Don. Yeah. So at a high level, there's really three main goals or themes that we really believe characterize well this vision for ESS. And that's one, more centralization and collaboration; two, better risk management; and three, greater flexibility. So those three goals really underpin this entire framework and vision for ESS, and we also believe it puts us on the path well for our 2020 Vision as well.

We also think those goals are really consistent with our Investment Beliefs as well, particularly Investment Belief number 6 around strategic allocation; Investment Belief number 7 around risk reward; and Investment Belief number 10, resources and strong possesses.

So over the next few years, ESS will be focused on these four general mandates represented by the cross there, that again really reflect those three goals again of more centralization collaboration, better risk management, and greater flexibility.

So starting at the top, we'll be working on

centralizing execution across multiple asset classes, particularly focused on the use of derivatives. This will help increase the transparency and risk oversight of plan level exposures, and the use of derivatives. And this increased collaboration should also give the asset allocation group greater flexibility to implement plan level initiatives.

I'll also note that this move towards increased centralization is really -- increased centralization of execution is really a trend we're seeing across a number of our larger peer groups as well.

Secondly, ESS will be partnering with the asset classes and asset allocation to help -- to help CalPERS continue to take advantage of, what we call, structural alpha opportunities in our holistic portfolio. So structural alpha in our mind are opportunities that really take advantage of CalPERS unique long-term positioning.

So securities lending, which is an integral part of ESS, is one great example of how we're harvesting the structural alpha. We'll also be looking to help support the asset classes, as they harvest these alpha opportunities in their respective areas as well.

Our third mandate is around liquidity and leverage. As you know well, and we've been talking about, the fund must manage liquidity more carefully in this

environment due to our negative net cash flow status, and also the tighter target liquidity bands that we have.

So in light of that, ESS will also be increasingly working with asset allocation, as an execution partner to help manage this total fund liquidity profile.

So these are tool such as borrowed liquidity, and notional leverage, which have been discussed previously with this Board, are two good examples of the way ESS will be assisting asset allocation on the implementation of plan level Liquidity management and provide more flexibility all within a risk controlled framework.

Finally, our fourth mandate is focused around the market regulatory agenda. So as you'll recall from last month's Board meeting, as part of the global governance realignment that was just approved, two members of the Global Governance staff have just joined the ESS team to focus specifically on market and regulation.

So as we integrate the staff onto the ESS team, bring them closer to the market dynamics that we're seeing on the trading desk, and also begin to really collaborate more on key issues across the asset classes, we believe we can really be collectively increasingly more effective and focused in advancing the ESG and the regulatory agenda that's important to Calpers.

So again, the themes of more centralization, collaboration, where it makes sense we have believe can really help us be more effective and focused.

So with that, I'll turn it back to Don.

INVESTMENT DIRECTOR PONTES: Great. Thanks, Brian. If we could move to the next slide.

--000--

CHAIRPERSON JONES: Go ahead.

INVESTMENT DIRECTOR PONTES: There we go. Thank you. So for the sake of time, I won't go through detail, but basically what you see here, we've highlighted a few of our key accomplishments over our first year, some of our key objectives for the fiscal year going forward and beyond. And really, I think what all of them highlight is just attempts to reiterate the focus points of the ESS mandate.

And again, going through those, because I think they are important to highlight, and that is one, focusing on centralization of key cross-asset functions within the Investment Office really trying to improve collaboration and integration across the Investment Office.

Two would be that improved risked management, particularly through increased transparency really resulting in a more efficient process by which we can monitor and manage plan level aggregated risks

particularly related to the use of derivatives.

And then finally, the development of a platform that ultimately gives the plan greater flexibility for the implementation of a number of these cross-asset mandates that we attempted to highlight.

So that provides the overview for the execution services and strategy platform and we'd be happy to take any questions.

CHAIRPERSON JONES: Okay. Thank you. And we do have some questions, but we have to take a break for the recorder. And rather than having a 10-minute break and then break later for lunch, we're going to break for lunch now and return at 12:45. And I will ask that Don and Brian return to the stage to answer the questions that are for you, and then we'll move into Andrew and Christine's presentation at that time.

Okay. Thank you.

(Off record: 11:54 a.m.)

(Thereupon a lunch break was taken.)

## AFTERNOON SESSION

(On record: 12:50 p.m.)

CHAIRPERSON JONES: Okay. I'd like to reconvene the Investment Committee meeting, and we are going to start with Don and Brian, because there were a few questions that were raised before we broke for lunch. So, Mr. Jelincic, you can now ask your question.

COMMITTEE MEMBER JELINCIC: Thank you. How does ICOR fit into this, if at all?

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: I can take that one, Mr. Jelincic. ICOR has been involved in the development of ESS since its inception last year. All of the activities of ESS actually take place within the context of the relevant investment policies for the asset classes. And, of course, ICOR is responsible for making sure that all of our activities comply with those investment policies.

So specifically, Brian McQuade within the ICOR team has been working with Don and Brian on the execution activities that they undertake to make sure that they're done within the context of those policies and procedures.

COMMITTEE MEMBER JELINCIC: Okay. Thank you.

CHAIRPERSON JONES: Okay. We had another request to ask a question, but we're going to defer that for right now, and move on to Andrew and Christine. And if they

come back, then we'll just ask you guys back up, if the question is related to that presentation, okay?

3 Proceed.

--000--

INVESTMENT MANAGER KARSH: Great. Thank you, Mr. Chair. Andrew Karsh, Investment Manager, Global Fixed Income.

In terms of today's review of the commodities program, the Board originally approved the commodities investment program in 2008 as part of the overall inflation strategy to help mitigate some of the potential negative impacts of inflation, not only on the returns of the fund, but also on the potential adjustments related to cost of living that often impact the plan.

In terms of an inflation hedge, so far over the last 30 years, the commodities benchmark that CalPERS has chosen, which is the GSCI index, has had a 0.7 correlation to the consumer price index in the U.S., which, considering the goals of hedging inflation, has been extremely high and quite successful from that perspective.

--000--

INVESTMENT MANAGER KARSH: The benchmark itself, as you can see, is heavily weighted towards energy. And the purpose originally for choosing this benchmark, which I think still holds true today, is the high component of

energy and driving the Consumer Price Index in particular.

So when you think about what drives the consumer prices, whether it's power supply, whether it's gasoline for transportation, or whether it's related to other elements, such as production of goods that we're buying on a daily basis, these are all elements that flow through directly to the Consumer Price Index.

And as you can see other components that we have as well, industrial metals, livestock, agricultural all relate to directly to the foods that we're consuming on a daily basis. And that was really the background on choosing this particular index. And while there are others out there, we steel feel that this is the most relevant for Calpers in terms of the inflation hedge program.

--000--

INVESTMENT MANAGER KARSH: When you look at the program structure itself, the commodities program within fixed income is actively managed, and it's currently holding the target of 25 percent of the overall inflation program. The other 75 percent target of the inflation-linked bond program. As mentioned earlier, as of June 30th, we were slightly overweight commodities versus our benchmark by 1 percent. Hence, the numbers that you see on the screen of, at that point, 13.1 billion

inflation-linked bonds and 4.7 billion in commodities directly.

In terms of the active portfolio management, the team internally has an area of expertise to take directional bets, as well as other views on the market. And more recently, we've taken views more on a tactical basis of where the direction of commodities are going overall versus our inflation-linked bond portfolio. And as you can see on the bottom of this page, the performance has been quite good.

As mentioned earlier, 2015 to 2016 fiscal year, the inflation program out performed its benchmark by 140 basis points and has continued to be successful since the life of the program.

--000--

INVESTMENT MANAGER KARSH: Overall, the commodities program continues to produce the returns that we would expect considering the low inflation environment that we've exhibited in the U.S. over the last 5 to 10 years. The program itself also is being managed on a highly liquid basis, so we're talking about instruments that can be moved within a few days or weeks, if need be. And so certainly from an internal perspective, we feel comfortable that if there were changes to increase or decrease allocations, we can handle that.

And also It allows us to tactically move, as I mentioned earlier, between commodities and inflation-linked bonds that allows us to produce relatively high alpha sources over the last few years.

In terms of the team itself, again actively managed strategy, highly experienced team, and one that we feel very confident with going forward in terms our area of expertise and our capabilities in this space.

So at this time, I'd be happy to take questions. CHAIRPERSON JONES: Okay. Yes. Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: In the commodities space, last time I thought I knew what the program was doing. Essentially, it was trading the Goldman Sachs commodity index futures. What do you -- what are you trading now? And, you know, if -- as you do that, you know, how -- how do you try to generate performance above the benchmark?

INVESTMENT MANAGER KARSH: Sure. So in terms of the way the program is constructed, it's a combination of total return swaps on the Goldman Sachs Commodities Index, underlying futures, and individual commodities, and also options on those commodities as well as the index itself.

And so in terms of generating the alpha that we have, it's been an accommodation of both being either overweight or underweight the index itself, or

overweight/underweight specific commodities within that index, as well as we've used option strategies to try and generate additional return and/or reduce risk.

Again, over the last 12 months in particular, those strategies have been highly successful in terms of mitigating some of the downside risk that we saw in the portfolio.

COMMITTEE MEMBER JELINCIC: So you're trading the futures and swaps in the underlying elements as well, the live -- you know --

INVESTMENT MANAGER KARSH: That's correct.

That's a smaller part of our active management strategy.

But in terms of the liquidity of those products, the availability considering their exchange nature, in a global market itself allows us more flexibility than trying to trade in and out of index products as a whole.

COMMITTEE MEMBER JELINCIC: Sometime you ought to try trading butter futures. Take care.

Thank you.

INVESTMENT MANAGER KARSH: Thank you.

CHAIRPERSON JONES: Okay. No further questions on that item, so we can move to the next one.

INVESTMENT MANAGER KARSH: I'll turn it over to Christine Reese on the affiliate managers.

--000--

INVESTMENT MANAGER REESE: Thank you, Andrew.

Good morning, Mr. Chair and Investment Committee members. My name is Christine Reese, and I'm the Investment Manage for the Affiliate Trusts. I'm pleased to provide you with today's update, which will cover some background on exactly what the affiliates are. We'll talk about asset growth, investment implementation, and I'll close-out with a business update.

So on this -- on page 14, although the affiliates are often thought of as a group, they are, in fact, separate trusts as established by California law, and fall into four separate categories of plan types with each trust having a specific purpose and set of beneficiaries.

The defined benefit plan category is like the PERF, and that includes Legislators', Judges', and Judges' II plans. The other post-employment benefit category is the CERBT. And that allows for employers to pre-fund retiree health care costs. The health and welfare funds are the Long-Term Care Fund and the Health Care Fund, for which the investment portion of the Health Care Fund is a reserve for our CalPERS self-funded programs.

And in the defined contribution plan type, we have two types there as well, the 457, which is pre-tax and the SCP which is after tax

So across all of these plan types and individual

trusts, the distinctions are very important as each trust is considered individually from a tax, risk, investment management perspective.

--000--

INVESTMENT MANAGER REESE: Looking at assets under management, with investments at 12½ billion at fiscal year-end, asset growth has been quite strong, doubling in the last six years. Of note, the CERBT program has grown 325 percent, in large part due to employers focusing on reducing their retiree health care liability, and making some very strong contributions to that program.

Also of note is the defined benefit increase of 117 percent in those six years. That's in large part due to the Judges' II program, which relatively speaking is a younger pension plan that is still cash positive.

--000--

INVESTMENT MANAGER REESE: Moving into the investment implementation. In alignment with Investment Belief number 1 that liabilities must influence the asset structure, and Investment Belief 6, that the strategic allocation is the dominant determinant of portfolio risk and return, each affiliate trust has been individually reviewed to arrive at the asset allocation targets.

So this graphic shows each of the strategic

targets for the defined benefit, OPEB, and health and welfare trust, alongside the PERF, with the higher equity allocation to the left and the more conservative allocations to the right. The investment returns in the table below the chart, both the standard deviation and the returns over time, validate the approach and match up with the risk profiles and asset allocation for each of those trusts.

--000--

INVESTMENT MANAGER REESE: For the defined contribution program, they also have an asset allocation, but as well they have a glide path, which is represented by the graphic. So this shows how the asset allocation moves again from higher growth on the left to more conservative assets on the right.

And on the left is the target retirement date fund 2055. So, for example, a young participant might be in that fund, and the asset allocation glide path would reset for them. So they would remain in that fund through to retirement and we would move that allocation to a more conservative base as retirement approaches.

Again, the investment results in the table at the bottom reflect that the implementation is achieving the desired effect.

--000--

INVESTMENT MANAGER REESE: I've included this next page as some additional program attributes that might be of interest, but I will not review this in detail.

--000--

INVESTMENT MANAGER REESE: And then lastly, from a business management perspective, we strive to reflect Investment Belief 10, that strong processes and team work are needed to achieve CalPERS goals and objectives. In 15-16, we implemented and upgraded our technology, which is Artemis. That's a newly built allocation, rebalancing, and trade execution system that we use to manage the investment process for all of the affiliate trusts.

We've added resources to our team. And in collaboration with other INVO teams, we've completed the policy review and the Health Care Fund strategic asset allocation.

And then looking forward to 16-17, we're going to, as Dan mentioned earlier, expand Artemis into global equity to manage the capital allocation processes there.

We'll be embarking on a defined contribution product review that will take a look at the investment options, as well as resetting the periodic update to the glide path, and taking a look at fees.

And we will also, again with other INVO teams for the affiliate trusts, work on the strategic asset

allocation review in connection with the PERF ALM work that's upcoming.

This concludes my presentation, and I'm happy to take any questions.

CHAIRPERSON JONES: Okay. Any questions? Seeing no questions.

Then that concludes this part of the presentation.

And I would just like to say that Simiso, Mike,
Don, Brian, Andrew, and Christine, we normally don't see
you making presentations. And I just want to congratulate
you all on a concise and to the point presentation.

Good job. Okay.

Then we move to the next item on the agenda, consultant review of the global equity and global fixed income programs.

(Thereupon an overhead presentation was presented as follows.)

MR. FORESTI: Good afternoon, Mr. Chair,
Committee. Steve Foresti from Wilshire Consulting. I'm
joined today by my colleagues Andrew Junkin and Patrick
Lighaam. And we'll share our summary results from our
recent on-sites and meetings with both the fixed income,
as well as the equity committee.

But before going there, we just wanted to spend a

couple of minutes just talking a bit about the role of the -- the roles of the programs within the total fund.

--000--

MR. FORESTI: So I'm going to jump to in the slide deck that we've prepared page three. And this is a chart that we've begun to share with you from time to time, and something that we expect to put in front of you more and more often, as we talk about not just the total fund, but individual components of the fund.

And to orient you to the chart, this is essentially connecting asset classes to a macroeconomic environment in terms of their sensitivity to important economic factors. And specifically here, we have across the horizontal axis sensitivity of an asset class to economic growth. The assets that are off to the right of the chart would be those that benefit from improving and changing expectations about economic growth, and vice versa to those to the left.

And then across the vertical axis would be the same information but against changes in inflation expectations, where, as you move to the upper side of the chart, those would be asset classes that would be benefiting from an expected return standpoint, as expectations about increasing or inflating prices happens, and then the opposite on the bottom side.

The size of the bubbles in this particular exhibit relate to the expected return on the various asset classes. So the larger bubbles in relative terms would have higher expected returns than those have smaller size.

And I've circled the two programs here with the solid blue, which is up in the northeast quadrant of this report, being the Global Equity Program. Its main role would be to deliver, as the size of the bubble would suggest, return and growth to the portfolio. And then in the lower left circle, the fixed income portfolio, which plays an important role in terms of not just income, but some stability.

And you can see that just from how many of these asset classes chart across this exhibit, that fixed income plays a rather unique role. To connect this to the conversation earlier about the level of duration within the portfolio, all else equal, the more duration that would be in the program, the further down and to the left that that particular asset class would bring to the portfolio. So that increased duration in terms of its ability to diversify some of the growth assets in the portfolio, it's an important component of that process, that diversification, those principles.

The next two slides just very quickly just looking at the two programs, how they related to one

another.

2 --000--

MR. FORESTI: So on page four, this is simply looking at the rolling 1 year, or 12 month, return to the global equity as well as the global fixed income program. And you can see that at times they tend to move together. But in general, they're somewhat independent in terms of their return prospects. Indeed, if you look at the most recent 1 year observations, you see that in an absolute perspective the Global Equity Program delivered a negative return, but your fix income has offset part of that with a positive return.

So just seeing these lines move through time gives a sense of what their independence from one another are. And we look at that on the next page slightly differently by looking at rolling correlations between those two data series.

And, in particular here, we're looking at 3-year rolls. And you can see that this is an unstable relationship. It doesn't move perfectly horizontally across the page, but you do see at times positive correlation, at other times negative correlations, which suggests that there again there is some independence. You can see at a high point during the global financial crisis in particular, there was some pretty high correlations

between the two asset classes, where, at that particular time because of what was happening in the credit side of fixed income, as well as the downdraft that equities were experiencing, you did see fairly high levels of correlation between the two asset classes.

I'm going to hand to Patrick to talk a little bit kind of across the two platforms about Investment Beliefs.

So, Patrick.

CHAIRPERSON JONES: Okay. Before we move on, we do have a question. Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: Yeah. If I can go back to slide 3, what did you say the size of the circles were?

MR. FORESTI: So the -- this is in relative terms. The size of the circle is the expected return of the asset class. So the larger the bubble, the size of the area of the bubble, the higher relative return to other asset classes.

COMMITTEE MEMBER JELINCIC: Okay. Thank you.

CHAIRPERSON JONES: Okay.

--000--

MR. LIGHAAM: Good afternoon, Chair, members of the Investment Committee. I first want to share this page with you, that specifically touches on the Investment Beliefs. And as the memo -- the introductory memo of

Investment staff already indicated, this agenda item is supported by Investment Beliefs 2, 8, and 10 specifically, which is what they indicated.

But actually, through our conversations with the Equity and Fixed Income team, we exactly did see very strong awareness of the Investment staff in all Investment Beliefs that you have defined. So that includes the 2 and 8 and 10 that they specifically referred to: 8, cost matters; 10, there's a strong need for processes and team work, but also number 2, which specifically relates to long-term investment horizon, that there's a responsibility, but also an advantage to your specific organization.

In addition to that, we also highlighted a few of the other Investment Beliefs that quite frequently reoccurred in the conversations with the Investment staff during our evaluations. And that include, for example, Investment Belief 5 and Investment Belief 7 touching specifically on, for example, risk and the performance attribution abilities that Investment staff has here at the organization, but also, for example, Investment Belief 7 stating that CalPERS will only take risk very specifically where they have a strong belief that they will be rewarded for it. And we saw this, for example, very strongly within specifically the global equity

portfolio, where we did indeed see that the value added was maybe from an absolute value point of view, maybe not that large, not that significant, but then relative to the level of risk that is being taken to achieve that outperformance. It is actually a pretty significant achievement.

--000--

MR. LIGHAAM: So on the next page, we touched specifically a little bit more about the ESG integration within the Investment Program. And if we look specifically at the last bullet on that page, I think it's very important to state that, first of all, we rate the Investment Office very highly with respect to the focus on ESG-related topics, not only if we compare that to other asset managers, but also if we compare that to the peers in your specific industry.

We looked at the ability of staff to actually observe the different ESG risk factors within the different individual strategies with the portfolios in aggregate, but also the ability to, for example, implement specific screens and look at things to actually improve the ESG characteristics of the portfolio.

Within the bullets highlighted on the top of this page, we did focus on specific areas where we believe that the ESG score is particularly high. And, for example,

within specifically the firm and organization score, the information score, but also the portfolio construction score, we observed a very high quality level with respect to the understanding about the ESG and integration within the program.

--000--

MR. FORESTI: Great. Now, we'll jump into first some specifics about the Global Equity Program. So there I'll start. And some of this I'll move rather quickly through because it's an overview of some of the just characteristics of the program that the staff has gone through for you earlier this morning.

But specifically in terms of the segmentation of strategies. And what we have here on slide 9 is a breakdown across two dimensions. One dimension would be in the columns here the types of strategies from index oriented, which would be nearly 60 percent of the portfolio to various forms of active management, which would be traditional active management, alternative beta type strategies, activist managers in the Emerging Manager Program. And then the rows would be a separation of how those allocations to strategy break down in terms of internal and externally managed assets.

And just one kind of caveat in terms of the alternative beta break down that we have here, which is

14½ percent of the overall portfolio. Just based on the classifications we have, the amount that's shown as external should actually be 0.6, so it's a smaller amount than is shown here. I just wanted to note that. In working through some of the classifications of the strategies, that's something that was picked up incorrectly here.

But the highlights would be, again, very -- and this is consistent with the mandate in terms of a low tracking error, 50 basis points or less, index-oriented, highly systematic type strategies through the alternative beta program, heavy use of internal management. Again, to the point I made about alternative beta, here we're showing just under 80 percent. It's actually a bit over 80 percent of the program is managed internally.

The lower table shows some of the shifts from a year earlier. And again, I think consistent with some of the goals of keeping expenses down, of keeping a risk control type of process, we see a shift out of -- again, over a short period of time, the last year or so, out of the activist programs have bid into more systematic types of approaches, specifically in the area of alternative beta.

--000--

MR. FORESTI: We'll do a very high level SWOT

analysis looking from at it from our assessment, the strengths, weaknesses, and then some of the opportunities and threats to the program. This all works into some scoring that we provided both in the opinion letter that we delivered, as well as we'll kind of end this section of the presentation by talking about, at a high level, some of that scoring.

But to start, the strengths of the program are clearly in terms of the experience of the leadership team, the MID, the other leaders of the program, the senior investors. It's a very risk-controlled process; innovative in the sense of understanding what the drivers are of return; using various forms of trying to achieve a return for the level of risk that's being taken; an effective use of a risk budget in terms of those systematic type of processes. Performance has been indicative of that. We'll touch on that very quickly here in a minute.

But the ESS program that you just heard a bit about is another strength, is centralized implementation and trading platform. As far as weaknesses, and these are just, you know, realities of just the organizational structure as you compare this fully operating investment management process to some of the peers in the industry, but also the privately-based peers that can offer various

forms of compensation as a bit more flexibility in terms of incentive packages. So that's a potential weakness in the program, and that's reflected in the scoring that we have.

Opportunities. The global equity team has been very involved in terms of many of the portfolio priority type of discussions. It was mentioned this morning, thinking about some of the characteristics of the Global Equity Program, how those might be contemplated to be delivered in a different way to change the risk profile of the program, and how it interacts and contributes to the total fund. So those are opportunities going forward.

And then the various committee and subcommittee structures within the platform, there's some opportunities there. And some of these subcommittees are rather new, and I think there's opportunities to, from a governance standpoint, allow those to continue to evolve and reap the benefits of that formalization of those committees.

And then finally, the threats, which I think are very well connected to the weaknesses that I noted would be the potential for senior level turnover. Some of the conversations that are opportunities at the total fund level are also, you know, not distractions, but they take up the time of the team to think with about not just delivering on the risk budget of the program, but in terms

of its contribution to the total fund.

With that, I'll get into performance. And here, I will move rather quickly because some of these numbers you've seen earlier today.

--000--

MR. FORESTI: And just start with the general recent performance here. In this chart, we have the 1-, 3-, 5-, and 10-year returns of the Global Equity Program against its benchmark. Short-term period of time over the last year very challenging environment for the global equity benchmark. As discussed earlier, the good news is that while the return of the program was negative, it's value-add to the fund, in terms of versus its benchmark, contributed a positive 60 basis points.

It was noted earlier that's -- it may seem like a small amount, but the target excess return of the program is 15 basis points for a year. This is half of the portfolio, so you can think about how directly that hits the bottom line of the fund.

--000--

MR. FORESTI: Moving to the next page, just to look at some of these numbers as they've moved through time, and here I have a 3-year rolling return on both the excess return of the portfolio, as well as the excess risk or tracking error of the global equity program against the

benchmark.

Let's start with the black line. That would be the rolling 3 year excess return annualized. And then the dash black line would be the target. That would be the 15 basis points of targeted excess return.

And you can see that recent performance is very strong in terms of delivering to that target return. The 10-year numbers that we just looked at were the only ones that were negative over those four horizons. And the reason for that is you can see from this exhibit is during the global financial crisis, there were big periods of underperformance versus the benchmark.

If we look at the blue line, that would be the rolling tracking error through time, I've put the dashed blue line would be the maximum range of the targeted risk budget, which would be 50 basis points or less is what the program targets, in terms of trying to meet that 15 basis points of return.

And you can see, again during the global financial crisis, that exceeded that risk budget to a pretty significant extent. I don't think that's a huge surprise, based on the level of volatility over that period of time, but it obviously coincided with negative relative performance. You can see in the more recent periods that in a very consistent risk-controlled way, not

only has that rolling tracking error stayed within the 50 basis points, but it stayed well within that, somewhere near the mid-point of that 50 basis point target tracking error range.

--000--

MR. FORESTI: Finally, I just wanted to focus a little bit on up/down market performance. I think this is an important glimpse, especially when we look at the program in terms of its performance during the global financial crisis and how the portfolio delivered during up and down markets, and how that looks currently.

And there's a lot of numbers on this page, so

I'll just try to call out, I think, what are some of the
more important ones.

So starting in the upper left chart, we're showing here over different frequencies, 1 year, 3 year, 5 year, and 10 year, the average excess return that was delivered per month in up markets, which would be the blue line, and in down markets, which would be the red line. And you can see in the shorter term periods that those numbers have been -- well, in 1 year, a slight negative in up markets, but very strong performance in down markets. And if you compare that to some of the numbers here over the 10-year period, you can see that's a bit of a reversal from what the experience has been as you go back and go

through the global financial crisis.

So some of the restructuring of the portfolio, namely moving into some of those systematic type of strategies, quality, type of factors, et cetera, have contributed to this result. These behaviors are not completely predictable as you go through time, but I think there is some clear evidence over the short term here that that beta relationship, if you will, in up/down markets that showed up during the global financial crisis is being managed in a way that is, again over the short term, led to different results.

If you look at the 3- and the 5-year periods of time, you're seeing positive results in both up and down markets, which ideally is what you'd like to see clearly is that their -- the program doesn't really have a bias to -- in terms of relative performance to up and down markets.

I'll kind of skip the chart to the right, because I think it just -- number one, it's a bit confusing. It shows that 3-year number through time, and you can see that it's -- the bigger shapes would be current. And that just essentially reinforces that through time, the up/down tradeoff has been a bit more favorable to the down markets not being as big a problem as they had been during the crisis.

I won't touch on the bottom charts. The bottom right we already talked about. Bottom left is just percentage pay-offs. What percentage of the months in up and down markets is there a positive performance being delivered?

But I don't want to belabor any of these points.

If there's questions, I'd be happy to take them. I'll

pass back to Patrick here in a second and we'll go through

the high level of the scoring across the different

components of the scoring model that we utilize.

 $\label{eq:chair_constraints} \mbox{CHAIRPERSON JONES:} \quad \mbox{Yes, we do have a question.}$   $\mbox{Mr. Jelincic.}$ 

COMMITTEE MEMBER JELINCIC: Yeah, I had a couple of questions. On -- well, it's -- I think it's 9 of 22, 275 of the iPad. If I'm reading this correctly, we have moved assets out of internal management and into external management, is that what that tells us?

MR. FORESTI: This overstates that, because of the point I made. So I made the point about the absolute allocations that we picked up a bit. So if you look at the alternative beta column, the externally managed amount, there should actually be 0.6 percent. So that translates also to the shift. That shift into alternative beta was essentially entirely in internal management.

So the bottom line shifts in terms of -- across

the columns is accurate, but the spread between the internal/external overstates the amount that's externally managed.

COMMITTEE MEMBER JELINCIC: Okay. So we have not moved for -- basically five percent to external managers from --

MR. FORESTI: That's right. So if you look at the act -- the traditional active, that -- those would be the moves into external. What' showing up here in the alternative beta overstates it. So that's correct, there's not been, nearly to the extent that's shown here, that move into external.

COMMITTEE MEMBER JELINCIC: Okay, because I thought we were moving the other way, bringing more in-house.

MANAGING INVESTMENT DIRECTOR BIENVENUE: Yeah, we've about flattened -- this is Dan Bienvenue -- I'm sorry -- Managing Investment Director of Global Equity.

We've about flattened that out recently. So we did fund for externally managed global partners. But to Wilshire's point, previously we also have sort of de-funded our activist strategy.

So, you know, we've gotten into that sort of 80/85 percent range right now and we've been there, I would say, for the past few years.

COMMITTEE MEMBER JELINCIC: Okay. And then on 278 of the iPad, and let me see if I can get, 12, the negative excess return. Obviously, the market return was -- how do I put this -- sucked, but we were --

MR. FORESTI: Technical term.

COMMITTEE MEMBER JELINCIC: That was a technical term -- but we were actually even worse. What -- why did -- why the tracking error pop up so much? I mean, I understand our absolute returns, but why the tracking error, and --

MANAGING INVESTMENT DIRECTOR BIENVENUE: So -yeah, so there was a handful of reasons there. One is due
to providing liquidity to the plan. So we were
unfortunately selling at the absolute worst moments, but
there was, between commitments in the private markets
coupled with some of our concerns around liquidity, at the
plan level, we were -- we were providing liquidity.
Global equity was the source of liquidity.

The other one that was in there was that this is back when the benchmark was purely inclusive of global equity, and yet we still had AR -- the hedge fund strategies in there. So the hedge fund contributed a fair amount of the volatility and specifically the downside volatility.

COMMITTEE MEMBER JELINCIC: Okay. And -- but if

we were selling into that market, I don't -- why did that change our relative performance relative to the index?

MANAGING INVESTMENT DIRECTOR BIENVENUE: So there's a couple of reasons there. One is that you could sell -- we were selling what you could sell, as a result of liquidity. So that tended to be the more high quality assets, and those were the assets that held up more, which left us in an overweight position to the lower quality assets that we're going down further. That was probably the main source.

COMMITTEE MEMBER JELINCIC: Okay. Thank you. CHAIRPERSON JONES: Okay. Proceed.

--000--

MR. LIGHAAM: Patrick Lighaam, managing director at Wilshire. We'll continue on page number 14, and talk specifically about the global equity program score. First of all, I wanted introductory remarks related to the scoring. We did make a change in the most recent year to enhance where you're coring managers in general, and hence also specifically your Equity and Fixed Income Program.

And as you will see later on, the approach and the segments that we're using for the Global Fixed Income Program are identical to the ones that we're using here for the Global Equity Program as well.

As you can see on the left-hand side in bold, we

have distinguished 6 major components. So that includes the firm and team, combined being the organization, the information gathering, forecasting, the portfolio construction, implementation, and attribution. And combined with the weights that are highlighted in the blocks behind the component names, the scores for the individual segments then roll up to a total score for the Global Equity Program.

Just as an additional indication with reference to the tiers that we indicate, so we rank our managers based on tiers, 10 tiers in total. The first one being the highest, being the beast, 10 being the lowest, being the worst.

So if we then specifically look at the 6 components on which we have scored the Global Equity Program, and just note that we do this on a forward-looking basis. So our best assessment on what we believe that given this current structure, we believe that the Equity Program is able to deliver with respect to outperformance, again on the forward-looking basis. We rank them in total for -- at the third decile, so that's very favorable.

We also wanted to just provide a few very quick comments. You do see that each second has a slightly different score. For example, within the firm and team,

these are the two subcomponents that actually roll up to the total organizational score. You will see specifically that 6 deciles, so that's slightly below average ranking with respect to the firm specifically. And this refers back to what Steve already mentioned with respect to the ownership, the fact that if you compare your equity team with, for example, the regular private market companies that over asset management serves us, they can actually provide other types of incentives and other ways to tie personnel to that organization, which is some of the incentives that you do not have in place, given your organizational structure.

So that is very much related to that lower score there specifically with respect to firm, that then hence also translates a little bit into the organizational score.

Also want to point out several of the positives, because the global equity team has scored very high, specifically on information, on the portfolio construction, but also specifically on the performance and risk attribution, which is the last segment listed here in the list, but also, for example, the resources that they have available for the implementation of the Global Equity Program.

So in the list on the left-hand side, you will

see the subcomponents and the score. You will also see some of the subcomponents, some of the things that we specifically look at when we actually evaluate, for example, a forecasting or an implementation component.

Any questions with respect to the scoring?

CHAIRPERSON JONES: Yes. Mrs. Mathur.

COMMITTEE MEMBER MATHUR: Thank you.

Well, this question about the ownership and incentives is a perennial issue, obviously given that we're in the public sector. You keep -- you raise it every year as an issue, but I don't know that the evidence is there that it's actually a weakness that we are having trouble attracting or retaining high -- you know, good talent in this area. So could you address that?

MR. JUNKIN: I think I'll take that as the Wilshire person at the table whose track record with these reviews, and those statements in particular, goes back the longest.

I think there -- the staff members that you have, we have no doubt about their capabilities and their motivations. It's the staff members that you're not able to attract, that sort of self select out before they're even part of the process, that, you know, you can't prove the absence of something.

But our view is that there are a number of people

that would be driven more by compensation or maximizing sort of lifetime net wealth, who would be drawn more to private firms because the compensation is higher, there's the opportunity for equity ownership, and things like that

Management Committee and Grant Thornton on the revision to the incentive comp program, one of the topics obviously was the long-term incentive plan. And I think that will be an interesting way -- if that comes back, that will be an interesting way to really kind of address this, because I think that will begin to -- particularly for people that are here for several years, if it comes forward in the way that it was originally discussed, begins to act as golden handcuffs, and that's -- in a good way.

So I feel like that actually was kind of an opening to us maybe not hitting this comment every single year as we do. But you're right, it's -- you should be attracting maybe people that are motivated somewhat differently, people that are motivated by a mission of providing secure and stable retirements to people in a meaningful way. People that maybe don't want to work, you know, investment banking hours of 14 hours a day, that like living in Sacramento instead of New York City or wherever. All of that works to your advantage in some cases. But there is, without question, some talent that

wants the opportunity to equity ownership and wants to maximize their income.

2.4

COMMITTEE MEMBER MATHUR: And I guess what this is saying -- this is making a value judgment that those -- that that would be better, that --

MR. JUNKIN: Well, capable, I think. And so it's a question of how much of the investment talent pool self-selects out? It's some amount. And quite frankly, as a consulting firm, we face the same issue. Consulting firms don't pay the highest wages in the investment business, even in the private sector. And so we frequently lose talent to people in investment banking and equity, in long-only equity and fixed income management, because they can pay more than a consulting firm can. So I can see it from a different perspective. I know it must be going on here as well.

COMMITTEE MEMBER MATHUR: Um-hmm. Okay.

CHAIRPERSON JONES: Okay. Proceed.

MR. JUNKIN: I think we're back to me. So I'm going to cover fixed income. This will be a little bit quit relative to --

CHAIRPERSON JONES: Just a minute, I think we have another question on the last subject.

Ms. Paquin.

ACTING COMMITTEE MEMBER PAQUIN: Thank you. Just

Thank

to kind of build on the last discussion point. So in addition to the changes that have been made at the Comp Committee, and going along those lines, are there any other things that you would recommend to expand recruitment and retention efforts?

MR. JUNKIN: Some of the things that have happened, and I don's -- I'd have to defer to Ted as to how much of it has been sort of intentional and how much of it has been just getting talented people in the right spots in the organization. But sort of the cross-functional workflow of the team has increased dramatically in the 11 years that I've been working with Calpers. It used to be a very siloed organization. If you were global equity, you were just global equity. That was it.

And, you know, I think about -- I think John Cole is a great example, someone that came in in global equity, has spent a lot of time on portfolio priorities, because, you know, his aptitude sort of drove him into those situations. And I think that those opportunities drive satisfaction for people, so that they're not just doing the same thing all the time. They're getting opportunities to grow intellectually and professionally.

ACTING COMMITTEE MEMBER PAQUIN: Okay.

you.

CHAIRPERSON JONES: Okay. Andrew.

--000--

2.4

MR. JUNKIN: Fixed income. So as has been discussed, this is a largely managed internally. You can see the number 93 percent there. One of the critical roles of this asset class is to act as a risk diversifier for equity risks. So Steve talked about that quite a bit. That is one of the places where the longer duration that you all have as a part of your portfolio design has really been beneficial, because longer duration securities sort of they magnify the flight to safety. When something is going wrong in the equity markets, it tends to be a better -- a better hedge that way.

Although, there are some aspects of the portfolio, for example, the investment in corporate debt or high yield debt that sort of echoes some of that equity risk. So if you wanted to be really pure about eliminating equity risk from this asset class, that would be something to debate. It would radically change the investment strategy. It's not something that I'm advocating. I'm just merely noting that there -- this doesn't completely eliminate the equity risk in the portfolio.

--000--

MR. JUNKIN: The SWOT analysis here looks very

similar. And I would say that, you know, in this particular case, you'll see, as we see regularly, that strength sometimes lead to threats. So you have a -- the longest tenured Managing Investment Director leading this part of the organization, which makes succession planning really kind of an issue that you haven't had to deal with in this asset class in a very long time. So how the team will adapt, if the managing director ever retires --

(Laughter.)

MR. JUNKIN: -- is an unknown. And other parts of the organization have dealt with it well. I would expect the same would be the case here, but it is a bigger unknown here than it is in some other segments.

We've talked about the organizational challenges. I won't belabor that. But I think it does -- in some ways, a lot of it does come down to hiring the right people at the beginning, right? That's -- and that's true whether it's Calpers or somebody else. You know, get the right people the first time around. The struggle to try to make a square peg fit in a round whole is one that is frequently fruitless.

--000--

MR. JUNKIN: Performance we've covered. I'm not going to spend any time here.

--000--

MR. JUNKIN: I will spend just a moment on page 19 to talk about the excess return and the tracking error. Steve spent some time here. Again, you see excess returns declined pretty precipitously. This is the 3-year rolling during the global financial crisis. So again, the comment that I made that some of the equity risk sometimes gets echoed here. Obviously, that was a very different scenario that hopefully equity declines are not frequently going to be driven by financial market conditions in the same way that that one was.

But that was a case where the diversification didn't come through in the way that we would have liked to have seen. It also ramped up the tracking error, which has since come back where we would expect to see it. And the limits on the deviations from the index have been tightened. And so really, post-global financial crisis, we've continued to expect this is going to look very much like its strategic role.

There's not a lot of opportunity, nor would it be Curtis's inclination, to take a big bet on a particular sector. That really wouldn't align well with, I think, what the Investment Committee is looking for out of this particular asset class.

--000--

MR. JUNKIN: And then page 20, the up and down

market performance. I'm actually going to focus on the one part of the chart that Steve didn't touch on, which is the frequency of success. And here, you can see 3 years, 5 years, 10 years. The fixed income portfolio -- when fixed income markets tend to be down, the fixed income portfolio tends to hold up a little bit better than its benchmark. It kind of hangs in during up markets, but it adds value when the -- that segment is down.

And then last is the scoring. Here, it is a little bit different. Obviously, the firm and the team get the same scores. The component scores for some of the others are a little bit different, but this is a very high score, second decile. This would be certainly a manager, if it were an external manager, that we would be recommending to clients. I think that's the key takeaway here.

The process works. It fits with exactly, you know, the strategic role of the plan, and it's well implemented.

So I'm happy to answer any particular questions. I know I went a lot faster on fixed income, since you'd seen the pages before on equity.

CHAIRPERSON JONES: Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: As you had been prepped, can you talk a little bit about the benchmark and

the -- because if I go to the Barclays, I can't find --

MR. JUNKIN: Yeah. So this is -- this is a custom benchmark. It is 40 percent treasuries, 30 percent mortgages, 24 percent investment grad corporates, 3 percent high yield, 3 percent sovereign. All but the mortgages and the high yield are 7 years and longer in maturity. So it is completely customized for Calpers. No other institution uses it, to my knowledge.

MANAGING INVESTMENT DIRECTOR ISHII: So it's customized, but it was established in 1982. As a long pension fund index, probably you recognize that. And it was traditionally provided by Salomon Brothers who have since --

COMMITTEE MEMBER JELINCIC: Wasn't it originally Shearson or Lehman Brothers.

MANAGING INVESTMENT DIRECTOR ISHII: No, we used the Salomon Brothers Long Pension Fund Index, as well as CalSTRS did that too.

We want to Barclays, because, at that time, Salomon was not supporting the index business very well, and so the percentages, X-high yield, is pretty much what it looked like back in 1982. We added 3 percent in high yield, because we thought it might be a good part -- a good part for return purposes. And it allows active management, if we didn't like high yield.

But it's not really changed, and it is customized, but it was one -- if you remember, everybody back then began to use it, all the pension funds. And since then, people started to go away from it. CalSTRS now uses Barclays Aggregate, so much shorter duration.

So there's only about 2 or 3 of us who use this long duration. That's why you can't find it. There's very few people who use it.

COMMITTEE MEMBER JELINCIC: And did we define it some place, Curtis?

MANAGING INVESTMENT DIRECTOR ISHII: Did we what?

COMMITTEE MEMBER JELINCIC: Did we define the index someplace and --

MR. JUNKIN: It's in the -- it's in the policy, I believe. Yeah.

COMMITTEE MEMBER JELINCIC: Okay, because I couldn't find it there either, but that's not to say it wasn't there. Okay. Thank you.

CHAIRPERSON JONES: Okay. Thank you. No further questions.

Before we go to the legislation, when we recessed, we were talking -- we received a presentation on Execution Services and Strategy. And I had mentioned that, when Mrs. Mathur returned, if she still wanted to ask a question on that, that we would have --

1 | COMMITTEE MEMBER MATHUR: Thank you.

CHAIRPERSON JONES: -- so -- because J.J. had an opportunity to ask his after we broke for lunch. So if you don't, we'll move on.

COMMITTEE MEMBER MATHUR: Well. It's okay.

CHAIRPERSON JONES: You don't have to.

COMMITTEE MEMBER MATHUR: That's all right. We don't have to bring them back up. Thank you. I'll ask it off-line.

CHAIRPERSON JONES: Okay. Thanks.

Okay. Now, let's move to legislation, Federal
Investment Policy Representative. And we're going to have
someone on the speaker. And we have Crowley, I think.

LEGISLATIVE AFFAIRS DIVISION CHIEF ASHLEY: Hi.

CHAIRPERSON JONES: Hi.

LEGISLATIVE AFFAIRS DIVISION CHIEF ASHLEY: Good afternoon Chair Jones and members of the Committee. Mary Anne Ashley, Calpers staff.

Mr. McKeever was called away on an urgent matter, so it is my pleasure to introduce Agenda Item 7, which is an informational item that our federal representative for investment policy will be presenting.

On the phone, we have with us today Mr. Dan Crowley, who's a partner with K&L Gates, who will be providing his report and update.

So, Mr. Crowley, are you present?

MR. CROWLEY: I am here. Can you hear me?

LEGISLATIVE AFFAIRS DIVISION CHIEF ASHLEY: Yes.

CHAIRPERSON JONES: Yes.

5 MR. CROWLEY: Okay. Thank you, Mr. Chairman.

It's great to appear before the Board again. Having managed government relations activities for a decade before joining K&L gates, I would be remiss if I didn't call to the Board's attention some of the structural changes that Doug McKeever has put in place that I think have really gone a long way toward improving the way that things are operating. And in particular, the appointment of Gretchen Ziegler to assist Mary Anne. She has broad responsibility for both State and federal.

I think bringing in Gretchen to assist on the federal level has allowed CalPERS to take much better advantage of the resources at your disposal, both internally and externally, to leverage those resources, and to develop more of a rapid response capability in terms of getting timely feedback to your outside lobbyists, as well as to building consensus internally. And I think you'll see, as I go through my report, that there has been some significant change in the effectiveness with which we are working. So I just wanted to make sure that the Board was aware of those

developments.

I'm going to cover some of the current policy issues that we're working on, and then talk a little bit about the D.C. engagement strategy and the progress that's being made there. And then I would be happy to take any questions.

In terms of the current issues that continue to be a priority with respect to the Investor Advisory

Committee at the SEC, we continue to press for CalPERS representation. I think there has been progress made in that area, and we very much hope that by the time we have the next Board meeting, there will be an appointee there.

As you know, Joe Dear was on the Committee, and we have been working for most of this year to try to secure an appointment. And again, I think there are grounds for optimism. But knock on wood, hopefully that will come to pass

With respect to the SEC Commissioner slots that remain vacant, as well as CFTC, we are cautiously optimistic that there will be a deal reached before the year-end, perhaps much sooner than that. The reason for that optimism is that the House -- I'm sorry, the Senate Agriculture Committee had a hearing last week with respect to the two CFTC appointments. We expect the Ag Committee to vote imminently on reporting those nominations

favorably to the Senate. And hopefully, at that point, there will be some sort of a bipartisan deal to move the appointees at both the SEC and the CFTC. And we're monitoring that very closely. Of course, we will keep you posted.

There are a number of SEC rule-makings on which CalPERS is actively engaged. One of them perhaps not as engaged as the others, but disclosure of order handling information. Don Pontes has expressed personal interest in that issue, so we're keeping him apprised of developments and comments that are submitted.

With respect to disclosures, there are two streams. One, of course, is Regulation S-K. These are all the non-GAAP disclosures that listed companies who must issue -- CalPERS submitted comments on July 21st. I don't think we've had a Board discussion since then, so I mention that.

But currently, we're working on the disclosure update and simplification rule-making, which is a complimentary rule-making. Mary Jo White, the SEC Chair, has put a lot of time and attention into disclosure effectiveness review. And these are two pieces of that effort.

In terms of the legislation, of course, we're monitoring all legislation that might impact CalPERS. But

there's a short list of bills that are of particular interest, based on policy directives from the Board.

Obviously, the large House bill, the Financial CHOICE Act, is something that we have been monitoring very closely, and have weighed in on. That bill passed the Committee on September 13th by a vote of 30 to 26. It was basically a party-line vote with one Republican voting no.

We continue to engage on the Investment Advisers Modernization Act, HR 5424, which passed the full House on September 9th by a vote of 261 to 145. There were a number of Democrats that supported that bill. But as you know, it would lower -- or, I'm sorry, raise the threshold for disclosure by private equity firms. And so we continue to engage on that one.

There is also HR 5311, the Corporate Governance Reform and Transparency Act, which would establish a fairly burdensome new regulatory regime for proxy advisors. That bill passed the Committee in June. We have weighed in on that and we'll continue to do so. HR 5429, the SEC Regulatory Accountability Act is another one on which we have weighed in. That one also passed the Committee and is awaiting floor consideration.

HR 4719, the Gender Diversity and Corporate

Leadership Act is a bill sponsored by the Capital Market

Subcommittee Member Carolyn Maloney, we have been

encouraging broadening that bill beyond simply gender diversity to include other types of diversity. And I think we are making some progress in that regard as well.

In terms of the D.C. engagement strategy, we -as I say, we've had a number of letters. We provided a
fairly comprehensive letter commenting on the Financial
CHOICE Act to Chairman Hensarling back in July. We -- as
it became clear that that bill was going to move forward
in the Committee, we then sent a follow up to Ranking
Member Waters, which included the fairly comprehensive
letter from July 15th, which Congresswoman Waters inserted
into the Congressional record during floor consideration
of that bill on September 13th.

Similarly, when we sent communication objecting to the private equity provisions in the Hurt bill back in June, it was again placed into the committee hearing record by Ms. Waters when they considered it on September -- I'm sorry. I've got that backwards. The letter on the Financial CHOICE Act was placed into the committee hearing record by Ms. Waters on September 13th. The Hurt bill letter was submitted for publication in the Congressional Record on the House floor on September 9th.

We also had continued the process that was started by CalPERS staff last year and this year. Last week Anne Simpson was in town for a series of meetings,

both on behalf of CalPERS, and as well as some meetings she participated in with Ceres. But on her own, on the CalPERS behalf, she met with members of the SEC and staff, as well as House Financial Services Committee members and staff.

It's important to note that she will be testifying before the Committee later this week at a Capital Markets Subcommittee hearing entitled Corporate Governance: Fostering a System that Promotes Capital Formation and Maximizes Shareholder Value.

This is a hearing focusing on a number of corporate governance issues. The testimony has been written and was delivered to the Committee at 11:00 o'clock this morning Pacific time. That hearing will be on Wednesday the 21st at 2:00 o'clock eastern time. If members of the Board or CalPERS staff want to watch that hearing live by webcast, it will be broadcast on the Financial Services Committee website, which is financialservices.house.gov. And then we will have Dan Bienvenue in Washington later this month for another round of meetings at the SEC and on the Hill.

So I think we're making pretty good progress, both in terms of engaging on the substantive issues, both regulatorily and legislatively, and then more broadly with engagement by CalPERS' senior staff with policymakers in

Washington.

And so with that, I will pause for any questions you may have.

CHAIRPERSON JONES: Okay. Thank you very much Daniel. We do have a few questions.

Mr. Costigan.

COMMITTEE MEMBER COSTIGAN: Thank you, Mr. Jones. This is just a process question. I note in the K&L Gates report that we took positions on four bills. I don't recall the Board taking a position on the bills.

CHAIRPERSON JONES: Oh, I'm sorry?

COMMITTEE MEMBER COSTIGAN: I'm sorry. This is a process question. In the K&L Gates reports, it says we took positions on four pieces of legislation, and I don't recall those four bills coming in front of the Board, or the Board taking a vote on them. So I'm not sure how K&L communicated opposition to legislation that I don't recall us voting on.

CHAIRPERSON JONES: Okay. So, I mean, we vote on State legislation, and the Board wouldn't take -- or staff wouldn't take a position without the Board approving it. How did four bills get a position without being voted on?

CHAIRPERSON JONES: Okay. You want to --

CHIEF INVESTMENT OFFICER ELIOPOULOS: I'll take that one. What I was asking -- I think on one of these

bills we did have a discussion and direction from -- at least direction from the Chair with respect to the diversity bill.

COMMITTEE MEMBER COSTIGAN: That was the support position.

6 CHIEF INVESTMENT OFFICER ELIOPOULOS: Yeah, the 7 support.

COMMITTEE MEMBER COSTIGAN: That would be the support.

CHIEF INVESTMENT OFFICER ELIOPOULOS: The oppose,

I believe we took because they were directly outlined in

our policy positions, but that's certainly a governance

question for the Board as to whether or not --

COMMITTEE MEMBER COSTIGAN: Well, and that's the process question. There are many policies that come in front of the California legislature that may or may not conflict with a statement, but we don't take a position until that bill comes up.

So I'm just curious, how did we take a position on 3 bills, an oppose position on 3 bills, with this being the first time I'm seeing it? So how did K&L Gates transmit our opposition, if we haven't voted?

LEGISLATIVE AFFAIRS DIVISION CHIEF ASHLEY: Hi.

Actually, what's happened is letters have been sent signed by senior staff, so they're not formal

positions that are --

COMMITTEE MEMBER COSTIGAN: Did we take an oppose position in the letter that was transmitted to Congress?

LEGISLATIVE AFFAIRS DIVISION CHIEF ASHLEY:

They're not oppose positions. They are letters that note our concerns. So in the report, it might say that we formally oppose, but I --

COMMITTEE MEMBER COSTIGAN: Well, Mr. Crowley, what does the letter say? I haven't seen a copy of any of the letters, so what do the letters say?

MR. CROWLEY: Well, it depends on the issue.

Typically -- first of all, let me just -- let me take a step back and say, from my perspective, this is the process working, in the sense that the Board has established clear policies and principles and guidelines and that sort of thing. And we have, as I say, developed rapid response capability, in the sense that we are monitoring all of the legislation coming through the committees of jurisdiction and keeping CalPERS staff apprised, so that when an issue arises that is something that is important to you, first of all, you've got advanced notice of it, and therefore time to weigh in.

And then secondly, we've been able to work with your staff to develop substantive concerns.

I would be happy to, of course, you know, discuss

this further off-line, if you would like to, or to discuss the content of any of these letters. But as a general proposition, we have weighed-in with some level of specificity with respect to the substance.

So, for example, just making HR 5429, the SEC Regulatory Accountability Act, this was a Republican-led bill that would impose a number of new requirements on the SEC rule-making process, and cut SEC funding, and the rest of that.

So we start off by explaining CalPERS interest in well-regulated capital markets, express concern about some of the unworkable provisions in the legislation, and then, of course, reiterate, as we do at every opportunity, a request for full funding for the SEC to ensure that investors are protected.

So I feel comfortable that the positions taken, at staff direction on your behalf, are consistent with the Board priorities.

Another one, of course, is the --

Crowley, just wait please. I understand the position you're taking. That's not what the Board typically does. The Board takes position on legislation. So I'm -- this is a process question. It's not what Mr. Crowley said the reasons to oppose the bill, but we submitted a letter. So

I just want to know what the process is.

CHAIRPERSON JONES: Right. Let --

COMMITTEE MEMBER COSTIGAN: So how did 3 bills -how did Mr. Crowley -- I'm just saying, how did -- so
we're opposed to 3 pieces of legislation that have yet -and I agree that there's an issue -- there are issues that
they fall within our policy guidelines, but they didn't
come before the Board.

So, Mr. Crowley, with all due respect, I understand the process very well, and -- but expressing concerns and putting it in a letter of oppositions. So in a support opposition on a bill analysis are we listed as opposed to these 3 bills? Is CalPERS listed in opposition?

COMMITTEE MEMBER COSTIGAN: That's fine. And I'm --

CHAIRPERSON JONES: -- to take a position.

The other bills, it was indicated that the concerns were expressed and they were identified and enumerated, and as a result of our discussion here. But if you're saying that you would want to have a discussion about further clarification on positions we'd take on

1 | federal legislation --

2.4

COMMITTEE MEMBER COSTIGAN: Well, I would be curious --

CHAIRPERSON JONES: -- we could go ahead and have that discussion.

COMMITTEE MEMBER COSTIGAN: Sorry, Mr. Jones. I would be curious, because we take specific positions on California legislation that comes in front of this Committee --

CHAIRPERSON JONES: Right.

COMMITTEE MEMBER COSTIGAN: -- under those same guidelines, and same policies, but we don't do them for the federal? I'm just trying to have a consistent argument here. Otherwise, I would just be happy to delegate, even on the State side to staff.

I mean, if that's the question to have is if we're going to vote on State bills --

CHAIRPERSON JONES: And I don't think ever bill at State level comes before us either. It's -- we've indicated to staff certain issues that we want to have a say in before they --

COMMITTEE MEMBER COSTIGAN: But one -- just one last comment, Mr. Jones. Do we take positions on State bills that the Board does not vote on a position?

25 LEGISLATIVE AFFAIRS DIVISION CHIEF ASHLEY: No,

we don't take formal positions without them coming to the Board. But on -- I understand what your asking Mr.

Costigan, and that is one of the processes on the federal side that we're trying to refine. I think in the past, that letters have been sent, but they're not sent on behalf of Calpers Board. So they're not saying that the Calpers Board is opposed to legislation.

- COMMITTEE MEMBER COSTIGAN: Well, then I would suggest you work with Mr. Crowley. When I get a report that says oppose HR 5427, that would imply to me, that we've taken a -- and I'm just -- Mr. Jones, no reflection on the bill. This is just a reflection on the process. I just want to know what the process is. Thank you.
- CHAIRPERSON JONES: Okay. So yeah -- so we will have this discussion off-line to talk about how we enhance the process to address the concerns that Mr. Costigan has raised.
- CHIEF INVESTMENT OFFICER ELIOPOULOS: Yeah, it's definitely a very important governance question -protocol question to make sure is clear to staff, because particularly at the federal level, not just at the legislative level, but with respect to the various agencies of the federal government, particularly the SEC, and the other regulatory agencies, staff regularly provides comment and testimony regarding these provisions.

And it's particularly important for our corporate governance activities, because we have a very well developed policy, and set of priorities that this Board sets, but -- and as a result, the process that we've been using is to take those policies and translate them into letters, and testimony, and positions to be fair with respect to bills.

So to make sure that we're not offsides -- we don't think we are, but to make sure that we're not, it's particularly important with our Governance Program to make sure we know, because if we don't have the authority to comment and provide testimony on our positions without first having an approval by the Board, we need to know that and just reorient our procedures to make sure that we get that.

CHAIRPERSON JONES: Right. And I think we could also clarify that, Mr. Eliopoulos, at our Governance Committee tomorrow. Okay. Okay. That would be helpful. Okay. All right. Thank you.

Mr. Jelincic.

COMMITTEE MEMBER JELINCIC: To the point that Rich has raised, you know, the weekly reports that the lobbyists write actually identify many of these issues, and say this is where we think we're going, and give -- it gives us a chance to say, hey, you're offbase, or, you

know, you -- you're in the right direction. So I think they are broadcast and put out there.

One of the things that the Legislature never does is give a title to a bill that actually describes what it does. And I don't remember what the Financial CHOICE Act that you referred to does, so could you enlighten me?

MR. CROWLEY: Oh, sure. Well, the Financial CHOICE Act is a comprehensive Republican initiative to revisit Dodd-Frank. It revisits almost every section of Dodd-Frank. It does a couple of things. One is it bundles together many of the bills that have passed the Committee over the last 3 years, most of which are bipartisan to some degree. But then it adds a number of more controversial provisions on which there is a clear partisan difference.

It has passed the Committee and we expect that it's not likely to go any further in the current Congress. And whether it goes further next year will depend largely on the outcome of the upcoming election.

But it is a comprehensive bill that we have been monitoring for many months, and which includes some of the bills we've been discussing.

COMMITTEE MEMBER JELINCIC: Okay. And 20 -- or 5424, it passed the House. Any sense that it will make it out of the Senate?

MR. CROWLEY: Not in the current Congress.

We -- unless there's a flurry of activity during a lame-duck session following the election. And, of course, we'll be monitoring both for whether it moves as a individual piece of legislation or as a part of a package, whether there's an Omnibus Appropriations bill or that type of thing.

If I could just comment, and this is a good example, rarely do we -- when we're engaging on your behalf say we oppose something outright. We will typically say, we pose oppose it in the current form. Here are our concerns. Here are our suggestions for change. So I don't want to leave the Board with the impression that this is a thumbs up, thumbs down. It is a constructive engagement with the process, in which we're communicating CalPERS positions, but it's relatively rare when we just say, we're opposed to this in a whole-sale fashion. So I just wanted to get that on the table as well.

COMMITTEE MEMBER JELINCIC: Okay. And then on HR 4718, the gender diversity, one of the issues you raised is deciding whether we should engage other members of the House Services Committee. What's the argument for that and the argument against it?

MR. CROWLEY: Well, I think a couple of things.

First, as you know, that bill would advance gender diversity. And the Committee has made it quite clear that they would like to see that broadened to include other bases for diversity, including race and other issues. And so we have actually had productive discussions with other members of the Financial Services Committee, and in particular, members of the Congressional Black Caucus.

Anne Simpson participated in some of those discussions last week, and that's the basis for my observation that we seem to be making progress, at least in terms of the Democratic side of the aisle.

In terms of the Republican side, until we have -- as long as they hold the gavel, until we have a Republican co-sponsor, it's not likely to advance. And so we continue to look for opportunities to identify other co-sponsors.

COMMITTEE MEMBER JELINCIC: Okay. And then on the S-K disclosure stuff, and Mary Jo White's plan to, quite frankly, cut disclosure. What's going on there? I mean, it's never we're cutting disclosure, it's just that we're making it more efficient by not disclosing things.

MR. CROWLEY: Right. Well, you know, there's a number of issues there. I think the CalPERS comment letter was some 30 or 40 pages long. The -- keep in mind, this is all of the disclosure that corporations have to

comply with beyond GAAP accounting. So you have sort of the snapshot of past economic activity reflected in the financial statements, and then you've got all of the other disclosures, the forward looking statements, the management discussion and analysis.

2.4

And these are the areas where a lot of the ESG agenda falls. So if there's going to be additional carbon asset risk disclosure, the SEC is going to have to figure out how to make that happen. So I think it's safe to say that much of the Calpers comment was in the area of ESG, the related rule-making to which allude the disclosure update and simplification is more the effort to try to pare back on the information that is provided. The SEC would argue that it is duplicative, or redundant, or overtaken by technological advancements.

And so the comment letter that is currently being drafted by the CalPERS Investment Office will undoubtedly take the position that it's better to provide more disclosure rather than less, and then let the institutional investor and other investors to determine what is relevant to them.

COMMITTEE MEMBER JELINCIC: Thank you.

CHAIRPERSON JONES: Okay. Mrs. Mathur.

COMMITTEE MEMBER MATHUR: Thank you.

At the expense of -- at the risk of prolonging

the conversation about the process, I just wanted to say that we've -- since -- as long as I've been on the Board, which has been almost 14 years, we've had this process of establishing federal priorities that then guide the staff and our federal representative's activities, mostly because federal bills can change so substantially and secretly that if we make -- took a formal position on any given bill, there's the risk the actual bill that would be ultimately adopted would be drastically different from what we actually wanted.

So I think that has been the practice. Now, it might be we want to revisit it, but I just -- that's why it's very -- so substantially different from the State process, from my experience.

My question for Mr. Crowley is with respect to the G-20 meeting that occurred two weeks ago where President Obama and Xi Jinping from China both announced that they would ratify the Paris agreement. And just curious if there -- what the ripple effect has been in D.C., what you think the implications are, what might be coming out of that?

MR. CROWLEY: Well, that's a very good question. First of all, I think that the ratification of the agreement was the first truly meaningful global climate change initiative. Between the U.S. and China, we clearly

are the largest contributors to global warming. And having those two parties agree is significant. As you may know the UN is meeting in general session this week in New York, and we hope to see some sort of announcement in this regard come Thursday.

So I think it is highly significant, and we remain optimistic that the SEC is paying attention.

Again, I think Anne Simpson's meetings this week at the SE -- last week at the SEC addressed a number of these issues. And there were fairly high level meetings at which the G-20 discussion, the Paris accords were discussed. So I think this is an area of progress being made -- another area of progress being made.

COMMITTEE MEMBER MATHUR: Okay. But nothing substantive yet coming out of it is what I'm hearing from you from?

MR. CROWLEY: Well, we will know more this week. You know, we have to get across the threshold of 55 percent of the global capital providers agreeing to move forward, which will be the basis of discussion at the UN this week. So more to come, and we will certainly be reporting on that.

COMMITTEE MEMBER MATHUR: Okay. Great. Thank you.

CHAIRPERSON JONES: Okay. Thank you. Seeing no

further questions, any other comments from staff?

Okay. Well, thank you. Then thank you, Mr.

Crowley.

Okay. We will move on to the next item on the agenda is the summary of committee direction.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:

Thank you, Mr. Chair. We have -- I have recorded two items, and Ted and I will need to make sure we triangulate these to make sure we've captured them all.

But the first was to discuss the utility of Wilshire's

TUCS Universe Report with the Chair and Wilshire and report back to the Investment Committee.

And the second item was to clarify the process and the level of Board involvement for responding to federal legislation. And my understanding is that that discussion will first be undertaken at the Board Governance Committee.

CHAIRPERSON JONES: That's correct.

19 CHIEF INVESTMENT OFFICER ELIOPOULOS: And then I
20 would --

GENERAL COUNSEL JACOBS: But not necessarily tomorrow. It needs to be --

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE: But not necessarily tomorrow.

GENERAL COUNSEL JACOBS: It needs to be properly

1 noticed.

CHAIRPERSON JONES: It's not on the agenda?

VICE CHAIRPERSON SLATON: It's number 7 on the agenda.

GENERAL COUNSEL JACOBS: Oh.

CHAIRPERSON JONES: Okay. Anyway, we'll deal with it. We'll deal with it. Okay.

CHIEF OPERATING INVESTMENT OFFICER TOLLETTE:
Assuming it's properly noticed.

CHIEF INVESTMENT OFFICER ELIOPOULOS: I would add two more, Mr. Jones. You directed that the calendar be changed and reflect the March versus April piece, and we will do that. It will be reflected.

And then we had a request from -- I believe that the Chair directed to look at the cash flow runs for a lower return environment, and to work with you to review that information.

CHAIRPERSON JONES: Right. Yeah, and I did -after I mentioned to Mr. Slaton, that I had seen some
information that maybe answers his question. I looked at
it during the break, and it doesn't. So you're right on
to respond to that request.

Okay. Thank you.

Okay. Then we now will move to public speakers.

We have a Mr. Stephen Conway, and then Mr. Loomis, and

then Ms. Myres or is it Mr. Myres? If you would come down to the -- this side of the auditorium and state your name and your affiliation. And each of you will have 3 minutes to speak. And the clock that you see right here will let you know. When you start speaking, it's starts to run. And it will let you know when your time is up. And if you could please honor that, we'd appreciate it.

So the other persons can just come sit behind Mr. Eliopoulos here, and we'll be calling on you shortly.

MR. CONWAY: Good afternoon, Chairman Jones and members of the Committee. My name is Stephen Conway. I am the director of finance for the town of Los Gatos, California. And I took the opportunity to attend the meeting today, because we're meeting with our actuary this afternoon to go through with some of the actuarial staff our asset loss, in terms of its impact to our unfunded pension liability.

So I'm here representing a city or town in California as an employer that, you know, has to deal with the impact when the returns are less than what we had hoped for in the actuarial assumptions.

For those in the audience, the actuarials use the term asset loss when there's -- the asset returns do not equal the actuarial assumptions which is essentially the discount rate, which is 7.25 percent. And I -- we are

under the impression that the return for 15-16 was 0.61. So if that's not correct, I need to be corrected in that, but that's the latest information I have.

And I'm very aware, because I've been in the public finance field for many years, that chasing yield is a dangerous objective. We've seen, in my career, Orange County, we've seen a lot of other agencies have trouble when they try to chase yield. But many of the directors, at least in the California Bay Area, that we've spoken with are very surprised by this low rate of return. And I just wanted to ask the question 0.61, it just seems extremely low to us, based on our own portfolios that we're managing with a much more restrictive portfolio that we can hold mostly five years and less, and pretty much no chance to go into equity market, or that short of thing.

We've heard a lot of discussion today, and it's been great discussion, about strategies and returns, benchmarks, caveats about the future from the Chief Investment Officer. Heard much discussion about how we're benchmarking.

I would ask that the Committee consider, you know, communicating back to the employers. We're getting a lot of questions from our local citizens. I personally in Los Gatos have five ex-CFOs that wanting to run projection models out 30 years, and convince me that, you

know, we're going to have issues, you know, 15 years from now, and much of the stuff that the Investment Officer talked about already today.

But the more information that we can get as employers, and it doesn't have to be -- I find some of this a little. When your -- it's good stuff, but it's -- I would like just maybe a paragraph explaining it's a big ship. We've made some course corrections. We're going to address this.

Why this is important is because when we're explaining this return to our constituents and why it affects our unfunded pension liabilities, we would like to have more ammunition in terms of how we explain to the public when they see their returns in their portfolios doing better. I know, for instance, in Los Gatos, for 15-16, we earned on average about 90 basis points, which -- and that's under a very restricted portfolio.

I looked at the Vanguard, you know, Total Stock Market Index Fund for 15-16 they just released. They're 2.14 percent.

So these are the things that we have to explain and we would just appreciate the Board's assistance in that.

CHAIRPERSON JONES: Mr. Conway your, your time is

167

up.

1

3

4

5

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

2 MR. CONWAY: Okay. Thank you.

CHAIRPERSON JONES: Okay. And just a point though, are you going to attend our educational forum in --

6 MR. CONWAY: I have not yet signed up, but I did 7 get some of the information.

CHAIRPERSON JONES: Okay. I think it would be intuitive to -- and maybe some information could be shared at that conference on that subject.

MR. CONWAY: Thank you.

CHAIRPERSON JONES: Okay. Thank you.

Mr. Loomis or Mrs. Loomis. Kristen Loomis, yeah.

And then Ms. Myres is next.

MS. MYRES: Yes. Chair Jones, I'm Jahmese Myres, and there's four of us and you called two of us already who were hoping to speak and we've all filled out cards.

CHAIRPERSON JONES: Okay. All four of you will be able to speak if you'd like.

MS. MYRES: Okay. Great.

CHAIRPERSON JONES: And unless you want to just give you 12 minutes and you decide who's going to say what.

MS. MYRES: Well, I think we've already divvied it up, so --

1 CHAIRPERSON JONES: Okay.

MS. MYRES: Yeah, we'll be within the limits.

CHAIRPERSON JONES: Okay.

MS. MYRES: Okay. Thank you very much.

Good afternoon. My name is Jahmese Myres. And thank you very much to the Board and members of the Investment Committee for hearing us. I know it's been a long meeting. So thanks for giving us a bit of your time.

My name is Jahmese again. I'm a resident and also work in the City of Oakland. And I'm part of the Revive Oakland Coalition. And Revive Oakland is a 30-organization coalition including labor unions, community groups, youth, and communities of faith. And some of our organizations in our coalition represent members who are either paying into or receiving CalPERS pensions. And our coalition believes and has experienced that when our City of Oakland creates good, long-term jobs for local residents, we strengthen our local and our regional economy, and ensure stable, healthy communities that continue to reinvest.

A few of us from the coalition are here to speak with you today, so thanks for the opportunity. And maybe just for a bit of background, Revive Oakland has been working together for 10 years, and almost exclusively focused on the redevelopment of the Oakland Army Base.

We're encouraged that one of CalPERS managers, CenterPoint, is working with the Port of Oakland on a warehouse development out at the Army base. And we believe that if this development is done right, it could be a great opportunity to bring good jobs to Oakland and generate economic prosperity for the community and for CalPERS as well.

Revive Oakland has been in negotiations with CenterPoint and the Port on a jobs policy that would govern the warehouse jobs on the property and would ideally bring living wage stable jobs to residents.

And we believe that CalPERS investment principles, responsible contracting, and ESG policies are very much in line with the vision for productive investment and long-term investment. And we believe that if CenterPoint continues to be in discussion with us, and negotiate with our coalition, we can reach a win-win agreement that will work for both CalPERS, for the community, and for Oakland.

And we want to just very much thank CalPERS for already being in discussion with our coalition, and particularly Carrie Douglas-Fong and Laurie Weir who've been working and supporting the coalition and supporting the discussions to continue with CenterPoint.

For us, you know, good jobs for local residents

really mean a healthy community and a healthy tax base.

And this could really be the type of equitable development that could be a model for the country, and certainly would be a win-win for Calpers and for Oakland. And we look forward to being in discussion, continuing both with Calpers and with all of you.

Thank you.

CHAIRPERSON JONES: Thank you.

MS. LOOMIS: Good afternoon, Board. My name is Kristen Loomis. I live in West Oakland, and I am one of your CalPERS' pensioners. I retired in December. I remain active in my union, SEIU on the Retirement Security Committee, and also in my community.

I'm here today to support Revive Oakland. First of all, my heartfelt thanks truly to you for my pension. I kind of slept through my retirement planning, but you guys took care of me for 36 years. And I am well off. I am doing well. I'm having a great retirement. And for that I do thank you, and your investment talent. Please, tell them for me thank you.

I am asking that you support a CenterPoint contract that promotes Oakland's financial well-being. A good CenterPoint contract with the points in it that Revive Oakland is asking for will have a ripple effect, will stabilize and enhance Oakland's financial base, which

in turn both protects your investment and my monthly paycheck, and possibly, probably even brings you more CalPERS members as Oakland and other local governments recover from the financial whole that they've been in.

That's all I have. I thank you for your meticulous fiduciary management, and your attention to ESG, I appreciate. I certainly don't every want you to go broke.

(Laughter.)

MS. LOOMIS: I believe this policy is a win-win opportunity to benefit both the pension fund and Oakland.

Thank you.

CHAIRPERSON JONES: Thank you.

MR. PAVIA: Hey. How's it going, everybody? My name is E.J. Pavia. I'm with Urban Peace Movement. California born and bred by way of East L.A. then to Santa Cruz, and then now currently in Oakland for the past five years, where I've been working with young people as a youth organizer and program coordinator.

We're also a part of the Revive Oakland

Coalition, and we work with several high schools

throughout Oakland to advocate for good jobs policies,

such as these that we're in conversation with CenterPoint

about. And we see that as one approach to preventing

street violence, which is something that you -- I'm sure

you're familiar with the City of Oakland and the news media, and whatnot.

So we definitely recognize that when it comes to our local economy that we need to think about the lives of the young people in Oakland, because they -- you know, they're for sure the future of our State. And the redevelopment project at the Army Base in particular is an incredible opportunity to invest, not only in the long-term health of Calpers, as we're learning, but also in the lives of the Oakland youth and their families.

So we're calling for family-sustaining jobs that are stable and accessible. So by that, I just want to offer a short anecdote. My brother has been in and out of prison for the past 15 years. And seeing him come out each time with more and more hope, you know, just to get his life back on track, wanting a fair shot at a job, get going on interviews, only to find out that because of his record, he was denied, you know, his right to work.

He has 3 kids. I don't see my nephews or niece too often, and I would like to see them a lot more. I share this story, because so many of the young people I work with in Oakland have a very similar story, where either their parent is experiencing similar barriers or someone in their family is.

So I come to you today just to acknowledge that,

you know, we really want a really strong jobs policy as a solution to some of the experiences that people are facing, some of the more negative experiences.

Again, thank you all for listening to us today.

Thank you for hearing us out. And I know it's been a long day for you all. And, yeah, thanks for considering this opportunity.

CHAIRPERSON JONES: Thank you.

MR. BRAZIL: Good afternoon, ladies and gentlemen of the Board. My name is David Brazil. I'm the organizer with Faith Alliance for a Moral Economy, which is an interfaith organization representing clergy and congregations that work for economic justice throughout the East Bay. I'm also part of the Revive Oakland Coalition, an Oakland resident, and as well a congregant in a West Oakland Church, Taylor Memorial United Methodist Church as is Kristen who has also spoken today.

It's a historically African-American Church that's been at the corner of 12th and Magnolia for 95 years this month actually. And Taylor is directly adjacent to the area of the Port of Oakland. And the issue of community benefits at the port is so important to this church and its pastor, that the pastor, Anthony Jenkins, hosted a town hall at the church in collaboration with Revive Oakland and another group Oakland Works in

order to share information about this important issue with members of the community. And he's also spoken at various rallies in support of it.

And he's not alone. He's part of a growing group of West Oakland pastors and faith leaders who understand that community benefits at the port is a racial justice issue. African-Americans and others who have been locked up are disproportionately locked out of employment by hiring practices that discriminate against the formally incarcerated, as E.J. mentioned.

And as we all know, the Bay Area is in the throes of a deepening housing crisis which is hitting these communities of color the hardest. When the Oakland Army base was flourishing, it was a source of wealth for all communities in Oakland, including these communities. We are looking at the prospect of new development that can lift up these most vulnerable neighbors, and we'll develop prosperity throughout our city.

My church has been in Oakland for 95 years, community organizers have been working on creating community solutions at the port for decades. We're here, and we're committed to working together with CalPERS, with CenterPoint, and with the Port to develop a long-term partnership that supports the prosperity of our diverse communities while honoring the fiduciary responsibilities

of the fund. Once more, thank you for your time.

CHAIRPERSON JONES: Okay. Thank you.

And thank all of you for your comments, and we appreciate you taking the time today to come and share your views with us. And I do understand you have been working with Mrs. Weir and her staff. And I would just suggest that you continue to work with her and to help solve this problem.

Okay. Thank you very much for your time.

That concludes the business of the open session, and we will reconvene -- we'll adjourn and we'll reconvene in closed session at 2:45.

(Thereupon California Public Employees'
Retirement System, Investment Committee
meeting open session adjourned at 2:30 p.m.)

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	

CERTIFICATE OF REPORTER

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing California Public Employees' Retirement System, Board of Administration, Investment Committee open session meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and was thereafter transcribed, under my direction, by computer-assisted transcription;

I further certify that I am not of counsel or attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 24th day of September, 2016.

2.4

25

JAMES F. PETERS, CSR Certified Shorthand Reporter License No. 10063

James 4